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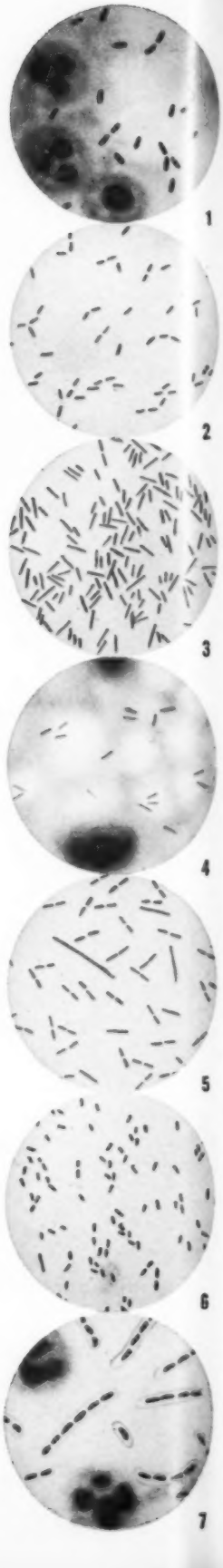


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# Editorials

## Concerning a Change of Status of the Welfare Department's Medical Care Program

On July 29, the Association received a communication from Mr. L. E. Rader, Director of the Department of Public Welfare, which outlined the Department's previous unsuccessful efforts to interest private insurance companies or Blue Cross-Blue Shield in providing medical and hospital care for Public Welfare Department recipients in line with the recipients ability to pay from his Public Welfare grant.

From the context of the letter I infer that the Department of Public Welfare is interested in making its records covering 13 months of operation available to the Association and to the Oklahoma Hospital Association in order that further study and consideration might be given to Blue Cross-Blue Shield as the administrative agent. Previously Blue Cross-Blue Shield has indicated interest in administration only on a cost plus basis. Perhaps with the data of 13 months operation available for study, a straight underwriting program can be developed. The Association should consider this in the light of the following points many of which have been commented on editorially[1] in the *Journal*.

1. Such an arrangement will take public medicine out of government hands and put it in the hands of an agency created by the hospitals and doctors to permit people to budget their funds for in-hospital medical care. In this agency no profit accrues to anyone and its articles of organization specify that its boards of trustees shall be composed of representatives of the public, the physicians and the hospitals.

2. It would give the dignity of Blue Cross-Blue Shield membership to the retired citizen whose income is adequate for such care only by pooling the resources of the entire group. This is no different from the condition that presently exists among the middle wage group; an awareness of which is the reason for the development of Blue Cross-Blue Shield in the first place.

3. The tax money is obtained from the sales tax. Of each sales tax dollar 76 cents goes for the subsistence of people in the old age group who cannot provide their own. The money that is used for medical care is taken out of this subsistence fund. It is, therefore, the recipients' own money which the public has given him for subsistence that is used. He pays and has paid the sales tax all along. Public Law 880 provides a Federal matching fund of $3 per month for each recipient for medical care. The recipient matches this $3. There is, therefore, $6 in the pooled fund for each recipient. This spreads the cost of care for this group over the entire citizenry rather than imposing it only on the physicians, the hospitals and charity organizations.

4. We regard our own system of medical care as the best in the world. This arrangement would fit the public medicine considered necessary into that system. To accomplish this and keep government out of the practice of medicine would be worth considerable sacrifice.

5. A fee schedule would be mandatory and it would be necessary for there to be a service type rather than an indemnity type contract. We should waive our objections to accomplish number 4, and besides in this income group any fee at all is something; but any fee at all removes the old people from being objects of physician charity and provides them with the dignity that goes with the satisfaction of paying their own way even though it is money that has been given them through taxes. This is somewhat comparable to the groups for which the employer pays for Blue Cross-Blue Shield. Perhaps both of them have earned it.

6. Such an arrangement could be the development of a pattern for the care of other medically indigent groups within the frame-

(1) Editorials J.O.S.M.A. 50:369 (Aug.) 1957; 50:595 (Dec.) 1957; 51:235 (May) 1958.

work of the American system of medical care. We should avoid, if at all possible, the entrance of government into the administration of medical care for any group. In no other way can we be assured of retaining the best in our system. There would be little incentive for future generations of boys and girls to go into medicine if all they have to look forward to is a back-breaking panel and no more income than just enough to get by on.

7. To obtain these advantages we would have to be prepared for some risks. Such a program would be straight underwriting for in-hospital medical care with the requirement being only a need for hospitalization —not necessarily a life-in-danger one. The program would have to stand alone. Blue Cross-Blue Shield could not secure it with funds held in reserve for its present contract holders. There will be only so much money. At the present time this will be less than $6 per month, per person, for the Public Welfare Department has also to provide nursing home care, nursing care in homes and other facilities for those who require care outside hospitals. If the money runs out before the end of the year, there just wouldn't be any more.

8. Perhaps this would be the incentive we need for working together to keep our own house in order by developing techniques that would prevent abuse. If everyone worked for the good of the group and the program—by not ordering hospitalization unless really needed and by sending the patient home as soon as good care would permit—there might be no need for the money to run out at all.—*B.H.N.*

*The matter was considered by the Association's Committee on Medical Care for Recipients of Public Welfare of which Doctor Mark R. Johonson is chairman. The following letter was written to Doctor Johnson.*

August 12, 1958

Mark R. Johnson, M.D.
1219 Classen Drive
Oklahoma City, Oklahoma

Dear Mark:

As I told you in our telephone conversation, an editorial will appear in the September *Journal* favoring every effort to work out a plan for Blue Cross-Blue Shield to take over the Administration of the medical care program for D.P.W. recipients. A companion editorial from you setting forth the reasons for your committee's opposite view would give the members a much better background for making up their minds should the matter come up before the House of Delegates.

It seems to me that the medical profession has a much greater responsibility for planning the care of medically indigent groups than only that of setting up a satisfactory fee schedule and insisting on the free choice of physician. It has the responsibility of seeing that these people are cared for within the framework of the American system of medical care. The average physician wants only to work and be let alone. It would be hazardous indeed, for him to be satisfied with the way the program has been administered by the Department of Public Welfare and, from what I hear, he is; because he has no security for its continued satisfactory administration beyond the present director and the present commission.

Third party medicine, unless we can control it, will ultimately lead to restriction of care to physicians who have demonstrable qualifications for that particular type of care. Some spokesmen for the U.M.W. are already pressing for this. In the case of general surgery the two demonstrable qualifications are certification by the American Board of Surgery and Membership in the College of Surgeons. There are many competent people in Oklahoma who have neither. In time, the Association can work out its own system of certification when it becomes necessary to do so, but not if we do not have some control of the third party. I know of no possible way to do so except through Blue Shield.

If, with your editorial, you wish to reply to this letter, it will be published also.—*B.H.N.*

*The dead-line for Journal editorials did not give Doctor Johnson enough time. This editorial will, therefore, appear in the next issue.*

# Scientific Articles

## *Technique of Exchange Transfusion and* Results Obtained *in* Erythroblastosis Fetalis

*LEONCIO VALLARREAL, M.D. and G. R. RUSSELL, M.D.*

During the past ten years, from 1948 to 1957, there were 35,279 livebirths at St. John's Hospital. Of these, 132 were diagnosed as erythroblastosis fetalis, which represents approximately .37% of the total number of livebirths (ratio 1:267) and 16 more cases of erythroblastosis fetalis were admitted from outside, making a total of 148 cases in this series. One hundred eleven babies were treated by means of exchange transfusions and 37 were treated with repeated small transfusions or not treated at all (Table I).

The type of incompatibility was found to be Rh in 72.9%, ABO in 18.9% and unknown in 8% of the cases where the diagnosis was made on the basis of clinical findings.

In the selection of cases to be exchanged, once the diagnosis has been established, we follow a policy similar to that carried out in most medical centers. Exchange transfusion is indicated under any of the following instances: (1) if the baby shows signs of disease within the first 24 hours of life (signs such as jaundice, hepatosplenomegaly, petechia, and so forth) or a hemoglobin of less than 15 Gms.% ; (2) if there is a history of previous erythroblastotic babies; (3) if mother's anti-Rh titer has been high during pregnancy and (4) if the bilirubin level is high in the baby's serum.

The indication for repeated exchange transfusion is based on the bilirubin level only. Our limit is 20 mg.% unless the patient shows signs of brain damage with lower levels. One of the babies developed kernicterus with a bilirubin level of only 13 mg. per 100cc (Table II).

We repeat the exchange transfusion as many times as it is necessary to keep the bilirubin under control. In our short experience we have found that the majority of the babies require just one or two replacements, however three, four and even five have been necessary in a few instances to keep the bilirubin level on the safe side.

The blood selected for exchange transfusion is as fresh as possible, group O Rh neg. for Rh incompatibilities, and specific type for the ABO group. If both mother and baby are Rh positive, blood that is not agglutinated by mother's serum is used.

As far as the technique of exchange transfusions is concerned, it would seem to be a simple and safe procedure when it is carried

**THE AUTHORS**

Leoncio Villarreal, M.D., graduated from the University of Mexico School of Medicine, Mexico City, in 1949. He is now serving his third year residency at St. John's Hospital in Tulsa.

This paper was presented at the Fourth Annual Meeting of the Oklahoma Association of House Staff Physicians on May 23, 1958.

G. R. Russell, M.D., graduated from the Western Reserve Medical School in 1925. After taking his internship at the University Hospital, Cleveland, Ohio, he served a two-year residency at the Babies and Childrens Hospital and City Hospital in Cleveland. Later he served Teaching and Research Fellowships in Pediatrics at Western Reserve Hospital and in Marburg, Germany.

At the present time, Doctor Russell is practicing in Tulsa and is a member of the teaching staff at St. John's Hospital.

Doctor Russell is a member of the American Board of Pediatrics and a Fellow of the American Academy of Pediatrics.

| Year | No. of Births | Liveborn Erythroblastosis | % | Cases from out of Town | Exchanged | Repeats |
|---|---|---|---|---|---|---|
| 1948 | 2,697 | 3 | .11 | 0 | 2 | 0 |
| 1949 | 2,936 | 9 | .30 | 0 | 7 | 0 |
| 1950 | 3,043 | 4 | .13 | 2 | 2 | 0 |
| 1951 | 3,349 | 7 | .20 | 1 | 3 | 0 |
| 1952 | 3,413 | 11 | .32 | 2 | 6 | 0 |
| 1953 | 3,579 | 7 | .19 | 0 | 3 | 0 |
| 1954 | 3,857 | 16 | .41 | 3 | 17 | 2 |
| 1955 | 3,967 | 26 | .63 | 2 | 24 | 7 |
| 1956 | 4,239 | 29 | .68 | 3 | 28 | 18 |
| 1957 | 4,199 | 20 | .47 | 3 | 19 | 15 |
| Totals | 35,279 | 132 | .37 | 16 | 111 | 42 |

TABLE I.—Liveborn Erythroblastosis and Exchange Transfusion at St. John's Hospital.

out carefully and complicated or expensive equipment is not required. The set we have been using at St. John's Hospital has been simplified as much as possible and has proved to be safe, easy to manage and to keep clean. The most important part of this set consists of a 20 c.c. Luer lock syringe, two three-way stopcocks, the umbilical vein cannula and rubber tubings for the donor's blood and waste basin.

For the past two years we have been using a regular infant feeding tube (gavage tube) size eight French, 15 inches long, as the umbilical vein cannula. This tube provides several advantages: a rounded tip that goes easily into the vein without injuring the walls; two lateral holes which provide a better flow of blood; there is no need for a needle between the tube and the syringe which reduces the chances of blood clotting; and finally, its bigger caliber makes the job easier and faster.

The baby is immobilized on a circumcision board and a hot water bottle placed between the baby's back and the board to maintain a proper body temperature. The stomach, esophagus and the posterior pharynx are cleared of all mucus and fluid before the procedure is started. Once the baby is immobilized, the umbilical card and the abdomen are sprayed with tincture of Zephiran and the sterile drapes are applied. The baby's face is left clear so that its reactions may be observed. The syringe connected to the three-way stopcocks and gavage tube is placed on the sterile sheets close to the baby. The rubber tubings are connected, one between the distal stopcock and the donor's blood; the other between the proximal stopcock and the waste basin. The whole system is cleared of air with normal saline solution and is then ready to be used. The umbilical cord is cut off at about one cm. from the skin margin whenever possible. If the cord is completely dried it must be cut off as close as possible to the skin surface. The vein is recognized as the largest structure in the cord. Once it is found, one edge of the vein is picked up with a mosquito forceps and clots are removed with gauze or skin forceps. The gavage tube is then gently inserted, making slight suction until a free flow of blood is obtained. This free flow is usually obtained at a distance of two and one-half to three inches from the skin surface. If the cannula is inserted further than that there is danger of entering the right auricle. Venous pressure is taken

| Times Replaced | No. of Cases | % |
|---|---|---|
| 1 | 69 | 62.1 |
| 2 | 29 | 26.1 |
| 3 | 11 | 9.9 |
| 4 | 1 | .9 |
| 5 | 1 | .9 |
| Totals | 111 | 99.9 |

TABLE II—Per cent of repeats.

as soon as blood flows freely. A cord tie is usually unnecessary.

Twenty c.c. of blood are taken from the baby and replaced with 10 c.c. only of donor's blood for the first one or two times to make a deficit of 20 c.c. (or 10 c.c. in small babies). The main purpose of this deficit is to be sure that the baby is not given more blood than is taken out, and this will be replaced at the end of the exchange.

From this point on the exchange transfusion is an alternate withdrawal and introduction of small volumes of blood (20 c.c. at a time or 10 c.c. when patient is in a poor condition) until a whole unit of 500 c.c. is used. The deficit made in the beginning is replaced and samples of blood are taken from the last blood obtained from the baby for tests. Each 20 c.c. in and out is carefully recorded on special sheets, with aggregate totals and time for each procedure also recorded.

Calcium gluconate, 10% solution, is given in amounts of one to two c.c. every 100 c.c. removed, depending on the size and degree of irritability of the baby. Oxygen is also given per mask continuously at slow rate and suction is made whenever necessary during the procedure.

Venous pressure is checked again at the end of the replacement. A "purse-string" suture is put in place around the vein and tightened after the tube is removed to prevent bleeding, and also to easily identify the vein in case replacement has to be repeated. A sterile dressing is also applied.

Penicillin is given routinely for at least three days as a prophylactic measure and the patient is observed carefully. A serum bilirubin is done every four to eight hours.

| | Cases Exchanged | Cases not Exchanged |
|---|---|---|
| Total in 10 yrs. | 111 | 37 |
| Kernicterus | 4 (3.6%) | 4 (10.8%) |
| Sec. Anemia | 13 (11.7%) | 20 (54%) |
| Deaths | 9 (8.1%) | 12 (32.4%) |

TABLE III—Sequelae and Mortality related to Exchange Transfusion

Our results have been as follows (Table III): A total of 111 cases of erythroblastosis fetalis were treated by exchange transfusion. Kernicterus occurred in four in spite of replacement. Of these, two were premature and in poor condition. Nine patients died during or after replacement was done. Five of these presented the picture of hydrops fetalis but lived long enough for treatment to be attempted; one other had extensive atelectasis.

Complications such as embolii, congestive heart failure or ruptured spleen have not been observed, however, respiratory arrest occurred in two patients, each of which required artificial respiration and stimulants, but later did well. Secondary anemia was found in 13 babies who had an exchange. Four babies out of 37 not exchanged developed kernicterus, secondary anemia was found in 20 and the total number of deaths was 12.

Our conclusions are: (1) the incidence of erythroblastosis fetalis has been low at St. John's Hospital for the past ten years; (2) exchange transfusion is simple and reasonably safe procedure, which should be done early and liberally, since that is the best way so far known to prevent kernicterus; and (3) the incidence of secondary anemia in erythroblastosis fetalis appears to be decreased by exchange transfusion.

## Summary

A review of 35,279 livebirths at St. John's Hospital, Tulsa, Oklahoma, has been reported. Incidence of erythroblastosis fetalis has also been reported. The value of exchange transfusion in the prevention of kernicterus has been observed and the technique of such a procedure has been briefly described and found to be an easy and reasonably safe procedure, which done early and liberally is the best treatment so far known for erythroblastosis fetalis and prevention of its sequelae.

Leoncio Vallarreal, M.D.
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# PERICARDITIS

*LOUIS A. SOLOFF, M.D.*

**THE AUTHOR**

Louis A. Soloff, M.D., graduated from the University of Chicago School of Medicine in 1931. He is certified by the American Board of Internal Medicine and his practice is limited to his specialties of Internal Medicine and Cardiology. He is Professor of Clinical Medicine and Chief of the Division of Cardiology at Temple University Medical Center in Philadelphia.

Doctor Soloff is a member of the College of Physicians of Philadelphia, the American College of Physicians and the American Heart Association.

This paper is part of a talk given at the 52nd Annual Meeting of the Oklahoma State Medical Association, May, 1958, in Oklahoma City.

Pericarditis by common usage refers to any proliferative or exudative reaction of the pericardium, whether inflammatory or not. With the exception of primary tumors and congenital anomalies of the pericardium which are rare, all of these reactions are secondary to disease elsewhere. Nevertheless, the clinical onset or recognition of pericarditis may be primary so far as historical or physical examination can detect. Thus, acute non-specific pericarditis and far advanced tuberculous pericardial effusion may be both primary from a clinical standpoint. On the other hand, pericarditis may be a contributing finding in an otherwise significant illness, such as viral pneumonitis; or may be a diagnostic or prognostic clue such as occurs in myocardial infarction, uremia, neoplasm, lupus erhythematosus, scleraderma or a variety of collagen diseases; or, pericarditis may make an illness significant when it would otherwise be trivial such as purulent pericarditis following a stab wound of the heart. Fortunately, with the advent of chemotherapy and antibiotic therapy, purulent pericarditis secondary to contiguous inflammation or neoplastic erosions are rare. Finally, a pericardial reaction may be completely silent as occurs in hypothyroidism.

Clinically, one can classify pericarditis simply into two types, acute, which is both proliferative and effusive, and chronic, which is proliferative with effusion or without. This proliferative reaction, with or without effusion, may produce constriction (or restriction) of myocardial motion.

One may also classify pericarditis according to its primary causes. Acute pericarditis of unkown cause is called acute non-specific pericarditis. It is very unlikely that this term represents a collective concept which includes many different diseases probably primarily of viral origin. Pericarditis may be of tuberculous or rheumatic etiology. These three types form the commonest of significance. Traumatic pericarditis is usually obvious. Pericarditis secondary to myocardial infarction represents primarily a diagnostic clue and uremic pericarditis a prognostic clue. Pyogenic pericarditis is likewise usually obvious. On the other hand, pericarditis secondary to neoplasm or allergy is frequently overlooked. Pericarditis due to diseases of collagen will be diagnosed with greater frequency if one recognizes that pericarditis is actually common when these systemic diseases are present.

The diagnosis of pericarditis is certain if a friction rub is heard. Indeed, this single sign is diagnostic even in the absence of any other sign and in the absence of symptoms. It, or course, frequently occurs in the presence of other suggestive symptoms and signs which I shall enumerate. But it is important to know that even as an isolated finding it is diagnostic and, indeed, perhaps the only clinically pathognomonic sign of pericarditis.

There are two clinically suggestive syndromes which are quite common and which make the diagnosis of pericarditis usually obvious.

The first is that called acute non-specific pericarditis[1] which frequently occurs in young adults and may or may not be preceded by a clinically evident mild respira-

tory tract infection. This illness is frequently ushered in by severe pain. The pain is commonly precordial in location but may occur elsewhere such as in the neck or back. The pain is aggravated by breathing, by swallowing and by a change in position. With this pain, shortness of breath to some extent is usually present and this shortness of breath may be relieved by the change in body position and particularly by leaning forward and may be aggravated by coughing. There are, of course, the general symptoms and signs of infection.

With this clinical syndrome, the diagnostic signs are the almost immediate presence of a friction rub usually intensified by quick changes in body position and characteristic serial electrocardiographic changes. The friction rub is usualy best heard in the left third and fourth space in the precordial region. The two phases of the friction rub are synchronous with the heart sounds, are apparently close to the ear and both sounds are of almost equal pitch and intensity. Occasionally, only the systolic or diastolic component may be present but if this is so, the sounds change quickly from day to day and frequently can be changed by quickly changing the body position.

The elevation of J in the electrocardiogram is followed by a persistence of concavity of the ST segment, a finding of particular importance in differentiation from myocardial infarction, particularly when the deviations of J are not concordant. An absence of changes in the initial deflection of the electrocardiograms are, of course, also characteristic and important in differential diagnosis.

Acute non-specific pericarditis requires nothing but symptomatic therapy and rest. The illness rarely lasts more than 10 days to three weeks. Pain, however, of a mild and recurrent type and also, at times, fever, may persist for several months and should not be mistaken for serious heart disease. It is important to bear in mind that tuberculous pericarditis may be ushered in with acute symptoms which can mimic entirely the syndrome of non-specific pericarditis. It is particularly for this reason that these patients should be under observation to make certain that complications are not present. Constrictive pericarditis, however, may on rare occasions follow acute non-specific pericarditis. I have also seen massive pericardial effusion as a temporary complication of this disease which makes the differential diagnosis from tuberculous pericarditis all the more difficult.

The second clinical syndrome is that of acute tamponade which most commonly occurs after trauma, hemorrhage and, less frequently today, after infections. The characteristic clinical syndrome is that of increasing venous hypertension as manifested by distended engorged neck veins and progressive arterial hypotension associated with tachycardia and a parodoxical pulse. A paradoxical pulse is characterized by a diminution in the volume of the pulse with inspiration. Usually this diminution is sufficient to lower the systolic blood pressure by more than 10 m Hg.

Pericardial effusion alone forms another clinical syndrome which, however, is not always easily recognized. One should suspect the possibility of pericardial effusion whenever there is unexplained enlargement of the cardiac silhouette. If, in addition, a friction rub is heard, pulsus paradoxus is present and there has been an enlargement of the liver which has preceded edema of the lower extremities and if the circulation time is relatively normal compared to the increased venous pressure, the diagnosis is almost certain. The diagnosis also appears very likely if there has been a sudden increase in size of the so-called cardiac silhouette. One should, of course, always suspect pericarditis when the heart is enlarged in the presence of systemic disease which frequently or occasionally is associated with pericarditis.

If the specific cause of a pericardial effusion is not obvious, a pericardial cap is indicated to establish its cause. Treatment depends upon the nature of the pericardial effusion. A massive pericardial effusion which has developed insidiously in a middle aged person, usually colored, usually is of tuberculous origin. In my own experience, collagen diseases, particularly lupus errhythematosus and scleraderma are commoner

causes of pericardial effusion than tuberculosis. Neoplastic diseases also rank high as well as do operations on the heart. It has been very surprising to me to find pyogenic pericarditis rare even after stab wounds of the heart by instruments which were anything but sterile.

The last clinical pericardial syndrome is that due to constriction[2] (or restriction). This complication is suspected whenever calcification of the pericardium is seen, which occurs in about 60 per cent of persons with constrictive pericarditis. One should suspect constriction whenever enlargement of the liver has preceded edema of the lower extremities and particularly when congestion appears to be out of proportion to the so-called cardiac size. It is important, however, to bear in mind, that more than one-half of all persons with constrictive pericarditis have a so-called cardiac silhouette above normal. Part of this increase in size is unquestionably due to the thickness of the pericardium which may reach actually 2 - 3 cm. but part may also be due to encapsulated effusions as well as to pre-existing cardiac enlargement.

Although the diagnosis of pericarditis is usually made with confidence when the syndrome of acute non-specific pericarditis is present and also when a friction rub is present and also when acute tamponade is present, the diagnosis of pericarditis when pericardial effusion or constrictive pericarditis, the two important types of pericarditis, is not made so frequently with confidence particularly when calcification is absent. In my experience, pericardial effusion has frequently been mistaken for intrinsic cardiac enlargement. On the other hand, constrictive pericarditis has been diagnosed when diffuse myocardial disease has been present. For these reasons, we have searched carefully for methods of establishing the diagnosis with certainty. The findings on catheterization,[3] namely, a minimal and almost uniform increase in systolic pressure throughout right circuit of the heart followed by an early systolic dip which is succeeded by a sustained diastolic plateau the pressure of which is more than one-third of the pulse pressure is not pathognomonic of pericarditis. Such findings may be present in any type of diffuse myocardial disease including rare diseases such as amyloidosis and probably endomyocardial fibrosis. Venous angiocardiography[4] supplies a definitive answer.

Venous angiocardiography may be carried out with gas[4, 5] (pure carbon dioxide) or iodine containing liquid contrast substances. Carbon dioxide outlines the outside borders of the superior vena cava, right atrium and right ventricle and is therefore of value if fluid is adjacent to this border. Constriction, characterized by a rigid right atrial border and a loss of normal outward convexity, has been present in all our patients. The liquid contrast substance reveals fluid as a homogenous density surrounding the opacified heart of varying width. Occasionally, fluid may be more abundant on the left side and posteriorly. Furthermore, opacification of the whole heart permits an evaluation of myocardial function which may be impaired in pericarditis with constriction[6, 4] or effusion.[4]

## Summary and Conclusions

1. Pericarditis is an inflammatory and/or exudate reaction to the pericardium which can be classified into an acute and chronic stage and further subdivided into its underlying causes.

2. Clinical syndromes are briefly described. These are: (1) friction rub, (2) acute non-specific pericarditis, (3) acute cardiac tamponade, (4) pericardial effusion, (5) constrictive pericarditis. The last two may escape clinical detection.

Venous angiocardiography is offered as a method of providing a confident diagnosis of either constrictive or effusive pericarditis or both.

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**THE AUTHOR**

Lawrence C. McHenry, Jr., M.D., graduated from the University of Oklahoma School of Medicine in 1955. He served as a medical intern and assistant resident in Medicine at Boston City Hospital and as an assistant resident in Neurology at New England Center Hospital. He is now a resident in Neuropathology at the Boston City Hospital and is a Teaching Fellow in Neurology at Harvard Medical School.

Doctor McHenry is a member of the American Association of the History of Medicine and a junior member of the American Academy of Neurology.

James Parkinson, a general practitioner, probably did not realize that his name would become eponymous when he published his *Essay on the Shaking Palsy* in 1817. In all likelihood he thought he would be remembered more for his endeavours and works in palaeontology. He also might have wondered if posterity would acclaim his campaigns for Parliamentary reform during the reign of George III. But most of his works, except for his concise description of paralysis agitans, are forgotten.

Little is known of his early life and education. He was born April 11, 1755 in Shoreditch, part of London. His father was an apothecary and surgeon, and, as was not uncommon for the day, James became his apprentice, and later took over his practice. His education and training were gained primarily from experience and instruction from his father. In 1785, however, he attended John Hunter's lectures on the principles and practice of surgery. He took these down in shorthand and afterwards transcribed them. They were published nearly fifty years later by his son, J. W. K. Parkinson, as, *Hunterian Remininscences: Being the Substance of a Course of Lectures Delivered by the Late Mr. John Hunter.* Even though Parkinson lacked formal medical training, we are able to get a picture of his opinion as to what constitutes adequate training for the times from his book, *The Hospital Pupil: or, An Essay Intended to Facilitate the Study of Medicine and Surgery.* In this he emphasizes the need for a university background and a knowledge of Latin, Greek and shorthand.

In England during the 1780's and 90's, following the American and French Revolutions, there was a clamour for Parliamentary reform and change of the existing excise laws, lack of proportional representation, discrimination against the working classes, etc. Numerous societies and secret groups were formed to promote these and other causes. Parkinson, attracted by the plight of the poorer classes and the inequities in the laws, became a reformer and radical, and joined two of these groups, the Society for Constitutional Information, and the London Corresponding Society. He wrote several articles and pamphlets published between 1792 and 1795 under the name of "Old Hubert." Many of these were very humorous, some rather violent, but all had good circulation. In one, *The Budget of the People,* he says,

> The illjudged opposition of the voice of the collective body of the people in a cause peculiarly their own, will, in all probability, render the triumphs of the friends of freedom more complete and this, perhaps, at no very distant period.

In another, *An Address to the Hon. Edmund Burke, from the Swinish Multitude,* which is a reply to Burke's denunciation of French democracy, he concludes:

> Let us then be all esteemed as swine together; we will be satisfied with the plain appellation of the *swinish multitude,* whilst you and your friends who are so fond of distinction, shall be termed HOGS OF QUALITY.

When more violent elements of the populace began to riot in parts of London, the officers and many members of the reform societies were arrested. Among the imprisoned were several of Parkinson's friends, and more than one was executed for treason.

Parkinson himself was called to testify at the trial of some of his colleagues who were arrested because of their implication in the Popgun plot. This was an alleged plot to assassinate George III in the theater by means of a poison dart discharged from a popgun. William Pitt was present at the trial which lasted several days. Parkinson was examined under oath and admitted being a member of the Committee of Correspondence of the London Corresponding Society, and writing various pamphlets. His testimony could have incriminated him in the plot, but he remained honest and forthright in his statements which did much to aid his friends and bring to light the true nature of the plot, which was more a farce than a real attempt on the King's life.

Parkinson published other essays dealing with political matters after 1795, but he no longer actively participated in the controversies. He now had a large practice and was spending more time in search for fossils. McMenemey says there can be little doubt that the writings of Parkinson played an important part in this clamour for reform, for in an age of illiteracy there were few men of culture who were able to express, and at the same time be familiar with, the grievances of the man in the street.

Parkinson mentions:

> Aware of the necessities of devoting the few leisure hours, which the duties of my calling left at my disposal, to some rational and amusing occupation, I have always cultivated, more or less assiduously, some branch of art or science, and thence acquired an enthusiastic admiration for the beauties of nature, and an insatiable curiosity to pry into the mysteries of the natural world.

When he became interested in palaeontology per se, we do not know, but in his book on Chemistry, published in 1801, he advertises that he is "engaged in researches respecting extraneous fossils, with the intention of publication," and "earnestly solicits assistance by such communications, and by such specimens or accurate drawings, as may serve to give value to his work." He had made frequent excursions to nearby quarries, pits, and ledges in search of fossils, shells, and other specimens. He had collected these for several years, and had made drawings of many of them. He said he was determined to classify all these curious animals in stone. The first volume of this famous work, *Organic Remains of a Former World*, was published in 1804, the second in 1808, and the third in 1811. The work went through two editions, the last in 1833. It was considered to be the first standard authority of its kind, and Gideon Mantell, a noted British palaeontologist stated:

> The publication of Mr. Parkinson's *Organic Remains of a Former World* at the commencement of the present century must be regarded as a memorable event in the history of British Palaeontology: it was the first attempt to give a familiar and scientific account of the fossil relics of animals and plants, accompanied by figures of the specimens described.

Parkinson was well known in the geological circles in London. In 1807 when the Geological Society of London was founded, he was among the eleven original members. He published other geological papers and in 1822 completed his *Outlines of Oryctology. An Introduction to the Study of Fossil Organic Remains.* It is described as a "veritable textbook with a detailed catalogue of all that was known about fossils in 1822, providing a mine of information for the serious student." It begins:

> Oryctology is the science which inquires into the nature, origin, and formation of those bodies which possess the figures, markings, or structure of vegetables or animals, whilst their substances evinces their having been preserved through many ages, by certain changes effected in subaqueous or subterranean situations.

And ends:

> From these several creations it appears that beings have proceeded, gradually increasing in superiority, from testaceous animals to reptiles, fish, marine and fresh-water amphibia, quadrupeds, and lately to man, who, in his turn, is destined, with the earth he inhabits, to pass away, and be succeeded by a new heaven and a new earth.

As a final commemoration of his geological efforts, Mantell and others named several specimens in his honor.

Parkinson wrote on other subjects besides political reform and geology. His book on Chemistry was a small text-book on inorganic and physiological chemistry, and went through several American and English editions. He wrote a medical book giving ad-

vice to the lay public which covered all aspects of disease and health. The book, *The Villager's Friend and Physician; or, A Familiar Address on the Preservation of Health, and the Removal of Disease, on its First Appearance*, was written as the conversation of an old village physician. Along the same line was his book addressed to children, "warning them against wanton, careless or mischievous exposure to situations from which alarming injuries so often proceed." His other works include pamphlets on the Poor Laws and the legislation concerning mental institutions.

He was as active medically as he was in other fields, and published works on gout, tetanus, typhoid, hydrophobia, and trusses. At the age of twenty-five he published his first medical paper, which was a challenge to and criticism of a series of published lectures of a successful practitioner, Dr. Hugh Smith. His prime contribution to medicine, however, besides his essay on the shaking palsy, was his description of the first case of appendicitis in the English literature. In 1812 he and his son saw a five year old boy boy with signs of abdominal inflammation who shortly died. At autopsy they found general inflammation of the peritoneal cavity that appeared to have spread from the vermiform appendix which contained a fecal concretion and was perforated. This case was reported to the Medical and Chirurgical Society and subsequently published.

Parkinson's claim to posterity, regardless of his other feats, seems to rest on his description of the Shaking Palsy. He made no detailed clinical or pathological study, but merely observed six cases, and read and reviewed the previous literature on the subject. His description, nevertheless, is quite clear, and he accurately describes his observations. He defines the Shaking Palsy as:

> Involuntary tremulous motion, with lessened muscular power, in parts not in action and even when supported; with a propensity to bend the trunk forwards, and to pass from a walking to a running pace; the senses and intellects being uninjured.

Although he fails to bring out such manifestations as rigidity, he implies it in some passages. The essay is well worth reading, the history and case descriptions being particularly interesting.

Parkinson died at the age of sixty-eight years, having retired and turned over practice to his son sometime before. Mantell, who gives us many clues to his life and work, described him "as rather below the middle stature, with an energetic, intelligent, pleasing expression of countenance and of mild and courteous manners; readily imparting information either on his favorite science or on professional subjects." Rowntree notes that his unusual style of writing probably attracted some attention to his works. He says, "one is tempted to read on not so much because of the matter as because of the somewhat unusual and interesting method in which he reveals his ideas. He is verbacious and his sentences are complicated but readily understood. This peculiarity is common to all his writings."

Parkinson, although a general practitioner, was truly a doctor afield. Little was mentioned of him until Rowntree's paper in the *Bulletin of the Johns Hopkins Hospital* in 1912. He was revived again in 1955 with Critchley's fine book including Parkinson's biography, his *Essay on the Shaking Palsy* and the current clinical and pathological opinion on the disease. Garrison summarized his contributions: "an able geologist and palaeontologist, he is memorable, with Avicenna, Fracastorius, Stensen, Hutton, Wollaston, Owen, and Huxley as one of the many medical men who have contributed something of permanent value to these sciences."

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New England Center Hospital, Pratt Diagnostic Clinic, Boston 11, Massachusetts

*Ninth in a Series --*

# Management *of* Rheumatic Heart Disease

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Since carditis is the most serious manifestation of rheumatic fever, often leading to permanent disability or death, its prevention is the real goal in the prevention of first or recurrent attacks of rheumatic fever. Because of space limitations this review will be devoted primarily to acute rheumatic carditis.

In children less than six years of age carditis is often the presenting symptom of rheumatic fever whereas in older individuals it more commonly makes its appearance during subsequent attacks. Pathologically there is a pancarditis with involvement of the pericardium, myocardium, and endocardium.

No specific therapy is available for rheumatic heart disease. Although salicylates and adrenocortical hormones have been widely used, there is still no agreement as to whether these compounds offer merely symptomatic relief or whether they decrease the severity of the rheumatic process including that occurring in the heart. Although the response of rheumatic polyarthritis to salicylates is often dramatic, the effect on carditis, with the exception of pericarditis, is equivocal. Pericarditis like polyarthritis is an exudative reaction and often appears to respond to salicylate therapy. It should be borne in mind, however, that the course of pericarditis is extremly variable and the manifestations often subside without treatment.

It is also not clear whether adrenal steroids offer merely symptomatic relief or actually alter the course of rheumatic carditis. Several important questions concerning the use of ACTH, cortisone, and related agents may be raised: 1. Do these drugs suppress the rheumatic inflammatory process including that which involves the heart? Although it is difficult to quantitate, a number of case reports illustrating the suppressive effect of these agents on the rheumatic inflammatory process provide strong clinical support for the assumption that they may be life-saving measures in the type of attack that would ordinarily prove fatal. The frequent improvement in pericarditis, prolongation of the PR interval, and congestive heart failure suggests a beneficial effect on the carditis. Because of the similarity in microscopical architecture of subcutaneous nodules and the rheumatic lesions in the heart, the response of nodules to hormone therapy provides additional indirect evidence that these agents may favorably influence rheumatic carditis. However, the frequency of relapses or rebound phenomena on withdrawal of treatment point to suppression rather than termination of the process. 2. Does ACTH and cortisone therapy shorten the duration of attacks of rheumatic fever? At the present time the evidence is inadequate to provide a definite answer to this question. 3. Does hormone therapy prevent cardiac damage or reduce the amount of heart damage that results from rheumatic fever? The answer to this cannot be definitive at this time and many different studies give widely divergent findings in this

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regard. However, if all factors are considered, there is considerable evidence based on changes in heart size and heart murmurs during hormone therapy and particularly by data regarding the reduction in frequency of significant murmurs following therapy to suggest that the treatment of acute rheumatic fever with adrenal steroids may actually be effective in preventing heart damage.

The frequency with which favorable results are obtained with steroid therapy seems to be related to the duration of carditis at the time these drugs are instituted. As the duration of rheumatic fever before the beginning of therapy increases beyond a week, the frequency with which murmurs disappear decreases rapidly and the proportion of patients observed to be free from murmurs after therapy rapidly becomes smaller. In contrast to the effect of hormonal therapy in acute rheumatic carditis, the response of patients with long standing chronic myocarditis has been disappointing.

The serious untoward effects of these drugs—infection, water and electrolyte derangement, gastrointestinal catastrophes and others—should not be neglected. Although salt restriction is not as urgent with the use of the newer steroids, it is still of considerable import, particularly in the patient with cardiac failure.

The various indications for the use of adrenal steroids in the treatment of rheumatic fever in the hands of different investigators are too numerous and divergent to list. Some think these agents should be routinely used in all cases of rheumatic fever, whereas others think they should never be used. Some workers restrict their use to life-threatening situations while others regard them of benefit only if used within the first two weeks after onset of the rheumatic process. Much of the controversy is due to the lack of uniformity regarding dosage, stage of the disease when therapy is instituted, and duration of therapy. It must be recalled that rheumatic fever is not an accurately predictable disease. Large numbers of carefully selected controls treated in the same manner and at the same time are necessary to even out the individual variations in the course of this disease. When such controversy exists over the use of a new agent in a particular disease, there must be reservations concerning its true and ultimate value.

General supportive measures are of utmost importance in the management of acute rheumatic carditis. Emotional security and physical comfort should not be neglected. Morphine is the most effective drug in controlling precordial pain and mild sedation may be useful in the restless and apprehensive patient. The time honored routine of bed rest in acute rheumatic fever has not been seriously questioned until recently. Gibson and Fisher in Denver treated a group of patients with rheumatic fever with cortisone until all clinical and laboratory evidence of disease activity had disappeared for one week. These children were permitted full activity as soon as they felt well enough for such activity, which was often within 48 hours of admission. Some of these patients have been followed up to 27 months with an incidence of carditis no higher than that expected with traditional regimes. The series is too small and the duration of follow-up is too short to draw conclusions but such studies will be followed with interest. The impact of such an illness on the family cannot be dismissed.

Administration of oxygen, particularly in the presence of cardiac failure or rheumatic pneumonitis, is indicated. Although the use of digitalis is often thought to be contraindicated in the presence of acute rheumatic myocarditis, most clinicians employ it as well as diuretics, sodium restriction and other measures in the presence of frank congestive heart failure due to the rheumatic process.

There is general agreement that protection against infections with the Group A streptococcus is one of the major concerns in the total management of the patient with rheumatic fever. Severe cardiac damage is usually a result of repeated rheumatic relapses and these recurrences are in most cases associated with streptococcal infections. The treatment of the preceding streptococcal infection and protection of the patient who has had a previous attack of rheu-

matic fever against streptococcal infections has been discussed previously. Since the recurrence rate in patients who have experienced an attack of rheumatic fever is, on exposure to the streptococcus, 10 to 20 times greater than the initial attack rate, adequate antibacterial prophylaxis against the streptococcus cannot be overemphasized. In three British studies in 1939 and 1940, before the widespread use of antimicrobial drugs, hemolytic streptococci were cultured from the heart valves in a high percentage of patients dying with rheumatic fever. These studies as well as the role of the streptococcus in the initiation and development of acute rheumatic fever suggests the possibility that the elimination of this organism at the time that the signs of rheumatic activity are manifested might alter either the acute phase symptoms or the incidence of valvular heart disease or both. Accordingly Rammelkamp and co-workers undertook a study in Chile in which massive doses of penicillin were employed to eliminate the streptococcus from patients with acute rheumatic fever. Their results demonstrated no significant differences between the two groups in symptomatology, laboratory phenomena, or cardiac manifestation during the first six weeks. However, at the end of one year a difference of probable statistical significance was noted in the incidence of organic murmurs in those patients without advanced valvular heart disease on admission who had been treated with penicillin as compared to controls. This study is being continued and the results from a larger series will be awaited with great interest.

Space does not permit a discussion of the subsiding, convalescent, and chronic phases of rheumatic heart disease. However, the management of the patient during these stages is just as important as during the acute phase. No attempt will be made to cover in detail the extensive and interesting aspects concerned with surgical attack on chronic rheumatic heart disease. However, at the present time open cardiotomy utilizing extracorporeal circulation has been used to advantage in the treatment of selected cases of mitral stenosis, mitral regurgitation, aortic stenosis and aortic regurgitation.

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*Clinical Aspects of*

# MAGNESIUM METABOLISM

*WILLIAM O. SMITH, M.D. and JAMES F. HAMMARSTEN, M.D.*

Knowledge of the role of magnesium in human physiology is incomplete, but several vital functions of this ion have been established. Many of the intracellular enzymatic reactions in the intermediary metabolism of glucose depend upon magnesium as a co-factor, examples of which are the conversion of glucose-1-phosphate to glucose-6-phosphate and the decarboxylation of pyruvic acid.[1] The extracellular concentration of magnesium may be of considerable importance in muscle function. Magnesium has a sedative action at the neuromuscular junction by a blocking of acetylcholine release, which effect is antagonized by calcium.[2]

The normal adult human body contains about 20 gms. of magnesium, 98 per cent of which is within soft tissue cells and bone.[3] Striated muscle contains as much as 20 meq/liter of magnesium. The serum magnesium level is variously reported in the literature from 1.21-2.49 meq/L. (range of means), depending on the individual laboratories and the method employed. Obviously each laboratory must establish its own normal values for serum magnesium. Spinal fluid magnesium is generally slightly higher than in serum.[4] Gastric juice appears to contain about 1.0 meq/liter of magnesium.[5] Magnesium concentration in bile approximates that of the blood serum.[4]

The daily requirement for magnesium is about 5 mg./Kg of body weight. The average-sized person can remain in balance on 220 mg. daily.[6] Magnesium is provided in the diet largely by leafy green vegetables, meat and milk. Absorption from the intestine is probably regulated by the same factors that govern calcium absorption. The great majority of ingested magnesium is ordinarily excreted in the feces; only a small percentage is recoverable in the urine. Renal tubular reabsorption of magnesium oc-

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curs to a high degree, probably approaching that of calcium. Whether the tubules can also excrete the cation has not yet been established, despite several attempts to solve this question.[7, 8] As with calcium, there appears to be secretion of magnesium into digestive juices forming a "gut pool," and the small bowel contents seem to be rather rich in magnesium.

The controlling mechanisms for the usual serum cations have been demonstrated; but little is known concerning the regulators of magnesium metalobism. Recent evidence strongly suggests that the parathyroid gland is instrumental in this regard.[9]

A portion of the serum magnesium is bound to serum proteins. This appears to be about 20-30 per cent as compared to 50 per cent for calcium.[10] Evidence is accumulating that there is competition between calcium and magnesium for binding by the protein moieties.[11]

Twenty-six years ago Kruse, Orent and McCollum showed that rats deprived of dietary magnesium manifested hyper-irritability followed by convulsions and death.[12] Concurrently other workers established that "grass staggers" in cattle was due to magnesium deficiency.[13] Two years later Hirshfelder reported a group of patients with low serum magnesium and symptoms of twitching and convulsions.[14] These patients had renal disease or epilepsy. Several case reports also appeared in the literature linking hypomagnesemia to tetany in patients with severe diarrhea.[15] However, since some observers noted low serum magnesium values in patients without symptoms, symptomatic magnesium deficiency in man was not universally accepted.

Four years ago Fink and associates reported a well-documented series of patients with delirium tremens who showed low serum concentrations of magnesium.[16] Following intramuscular magnesium sulfate therapy, the symptoms of tremor and hallucinations cleared rapidly with a concurrent rise in serum magnesium. These observers also reported twitching, athetoid movements, and hallucinations associated with a low serum magnesium in patients with massive fluid loss, receiving no magnesium in the replacement solutions. These observations have been amply confirmed.[17, 18] McCollister, Flink and Doe have recently reported evidence for total body depletion of magnesium in patients with delirium tremens.[19]

The magnesium deficiency syndrome has also been observed in patients with chronic renal disease prior to the development of azotemia,[20] patients with osteolytic disease and hypercalcemia,[21] patients with hypoparathyroidism,[9] and patients undergoing marked diuresis induced by mercurial diuretics.[22] Hypomagnesemia has been reported in some cases of idiopathic epilepsy.

Treatment of magnesium deficiency at present consists of parenteral replacement with magnesium sulfate. We think that absorption of magnesium sulfate given orally is inadequate for replacement. The intramuscular route is commonly used and initially 8.0 gms. are given daily in four divided doses. After 48 hours the dosage may be decreased to 4.0 gms. daily. Obviously, therapy must be given until the deficiency is corrected, and maintainance levels must be provided if loss continues. The therapy should not be used in anuric patients and with great caution in oliguria or uremia. We feel it would be wise to add magnesium sulfate to sustaining fluid solutions in patients with deficient oral intake. Daily requirement could be met by 1.0 gm. daily.

Deleterious effects of excessive magnesium have been reported in only one circumstance, uremia. Hirshfelder reported several cases of coma and death in patients with uremia given frequent doses of magnesium sulfate as a cathartic.[23] We have noted high serum magnesium levels in patients with chronic renal disease, nitrogen retention and central nervous system depression.[20] Similar findings have also been reported in patients with acute renal failure.[24] Excessive magnesium administration to animals results in depression, coma and death.

In summary, magnesium is important in biochemical functions of man, particularly intracellular magnesium. A body deficit of magnesium produces a clinical syndrome of mental clouding, confusion, disorientation, hallucinations, tremor, athetoid movements and occasionally actual convulsions. Deep

tendon reflexes are generally hyperactive and a cardiac arrhythmia (ventricular irritability) has been noted. This syndrome has now been observed in delirium tremens, massive fluid loss, chronic renal disease prior to the development of azotemia, hypercalcemia and hypoparathyroidism. Treatment consists of parenteral magnesium replacement. Hypermagnesemia has been observed in patients with uremia, where it is believed to have a role in the central nervous system depression. Artificial dialysis may be indicated when hypermagnesemia is noted in patients with reversible kidney lesions.

It appears that with the development of better methods of determination and an increased awareness on the part of physicians in regard to this cation, magnesium will take its place beside sodium and potassium in clinical medicine.

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# *The* Functioning Carcinoid Syndrome*

*WILLIAM R. McCABE, M.D.***

The bizarre manifestations produced by metastatic malignant carcinoids have provoked wide interest in the clinical and biochemical aspects of this disease. Approximately sixty clinical reports describing the functioning carcinoid syndrome have recently appeared in the medical literature. The syndrome is usually characterized by reddish purple flushing of the skin, frequent watery stools, asthmatic attacks, acquired tricuspid and pulmonic valvular lesions and occasional sclerosis of the endocardium of the right atrium and right ventricle.[1-11, 16, 29, 44] More important than the collection of these unusual cases, has been the impetus this condition has lent to the study of the physiological effects of 5-hydroxytryptamine in the normal and in pathological states.[10-13] It is the purpose of this report to add three new cases to those previously reported and to review the biochemical and physiological manifestations of the syndrome.

## Case Reports

*Case I.* A 48 year old white man was admitted to the Univerity Hospitals on November 27, 1956. Abdominal distention, cramping, and watery diarrhea had had its onset in 1953. Subsequently the patient developed episodic facial flushing, dyspnea and weakness. During one episode of cyanosis a clinical diagnosis of myocardial infarction had been made. Progressive weakness, dyspnea, pedal edema and a 35 pound weight loss incapacitated the patient. At the time of hospital admission the nature of his illness remained obscure. On admission the patient's temperature was 99 degrees, blood pressure 100/60, pulse 100, and respirations 22. He appeared emaciated and chronically ill. There was marked erythema and telangiectasia over the malar regions. The tongue was smooth, shiny red, and there was marked hyper-resonance of the thoracic cage. The heart was not enlarged to clinical examination. A harsh systolic murmur which was accentuated by deep inspiration was heard over the lower sternal border. The liver was felt 8 cm. below the right costal margin and its surface was studded with nodules estimated as being three to four cm. in diameter. Hepatic compression produced a peculiar reddish purple flushing of the face, neck and upper chest. A moderate amount of ascites and pedal edema were present. A flexion contracture of the left knee was also noted.

*Laboratory Data:* The significant laboratory determinations are included in Table 1. These were remarkable only in the demonstration of a moderate anemia and significant hypoproteinemia. Abnormal amounts of 5-hydroxyindoleacetic acid were found in the urine. Other studies including urinanalysis, lupus preparations, and stool examinations for blood, ova and parasites were normal. Bleeding and coagulation time were within the normal range. The venous pressure was 96 mm. of water and the vital capacity was 3.4 liters.

A chest x-ray demonstrated hyperaeration of the lungs and the heart shadow was at the upper limits of normal in size. No specific cardiac chamber enlargement was demonstrable by fluoroscopy. Upper gastro-intestinal and small bowel x-rays indicated no abnormality of the esophagus and stomach but a diverticulum was found in the second portion of the duodenum and there were multiple diverticula of the jejunum. A slight amount of small intestinal segmentation was demonstrated. No intrinsic small intestinal lesion was seen. A barium enema was unremarkable except for slight spastic segmentation. Electrocardiography demonstrated a PR interval of 0.22 seconds, small QRS complexes in the precordial leads and early T-wave inversion in lead V4-6.

Intercostal hepatic needle aspiration biopsy revealed irregular nests of neoplastic cells with some attempt at glandular formation. The cells possessed uniform nuclei

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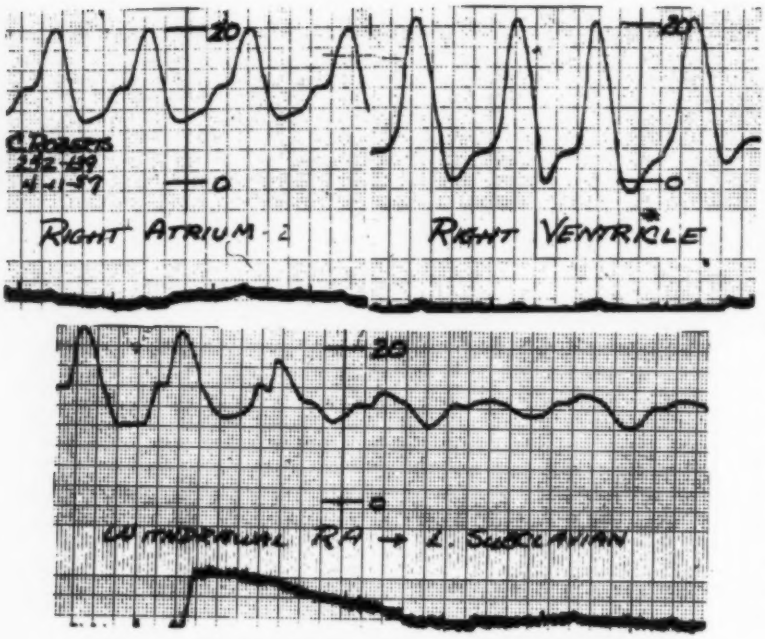
Table 1
LABORATORY DETERMINATIONS

| Determination | Case I | Case II | Case III |
|---|---|---|---|
| Hemoglobin | 9.9 | 13.2 | 15 |
| Hematocrit | 33 | 39 | 49 |
| WBC | 6,650 | 4,950 | 5,300 |
| Platelets | 320,000 | 216,000 | — |
| Albumin | 2.8 | 3.8 | 3.7 |
| Globulin | 1.8 | 2.14 | 2.6 |
| Total Bilirubin | 0.14 | 1.72 | — |
| Direct | 0.0 | 1.00 | — |
| Indirect | 0.14 | .72 | — |
| Cephalin Flocculation | 0/0 | 0/0 | 0/0 |
| Thymol Turbidity | 0.6 | 0.6 | 1.0 |
| BSP | 9% | 24% | 2% |
| Alkaline Phosphatase | 2.28 | 3.2 | 4.0 |
| Prothrombin Patient/Control | 14.5/16 | 21/13 | 16/15 |
| Cholesterol | 144 | 124 | — |
| Cholesterol Esters | 42% | 53% | — |
| Chloride | 99 | 114 | — |
| $CO_2$ Combining Power | 26 | 22.4 | — |
| Sodium | 135 | 135 | — |
| Potassium | 4.9 | 5.2 | — |
| Calcium | 8.1 | — | — |
| Phosphorus | 4.8 | — | — |
| Urinary 5-Hydroxyindoleacetic Acid | + | + | + |

with scanty cytoplasm. This was felt to be a carcinoid tumor by the examining pathologist, Doctor Walter Joel.

Therapy consisted of a high protein, high caloric diet fortified with large amounts of B complex vitamins and transfusions of whole blood and plasma. Digitalis and diuretics were instituted for treatment of congestive heart failure. Prior to liver biopsy some 3500 cc. of cloudy brown fluid was removed from the abdomen by paracentesis. Despite these measures the patient's condition deteriorated. He was discharged from the hospital for terminal care elsewhere and was lost to follow-up.

*Case II.* A 64 year old white man was hospitalized at the University Hospitals on April 2, 1957. During the preceding seven year period the patient had experienced abdominal cramping, 10-12 watery stools per day, episodic facial flushing and a 52 pound weight loss. Because of marked facial flushing, cyanosis, and tachycardia, an earlier dental extraction had been discontinued. Examination revealed a temperature of 98.6 degrees, pulse 72, blood pressure 120/70 and respirations 24. There was marked erythema and telangiectasia of the face, neck and upper chest. The neck veins were distended and pulsatile. Examination of the lungs demonstrated hyperresonance and diminished breath sounds. There was no clinical evidence of cardiomegaly. A loud harsh systolic murmur without significant transmission was heard in the fourth intercostal space at the left sternal margin. The liver was grossly nodular, pulsatile and extended below the iliac crest. An ill defined grapefruit sized mass was present in the right lower quadrant. Compression of either the liver or the abdominal mass accentuated the flushing of the face and neck.




| HEART CHAMBER | OXYGEN % SATURATION | PRESSURE, MM. MERCURY |
|---|---|---|
| RIGHT ATRIUM | 54.3 | 20/8 |
| RIGHT VENTRICLE | 56.3 | 21/4,0 |
| FEMORAL ARTERY | 98.0 | --- |

Figure 1. Cardiac catheterization findings. The upper left figure represents right atrial pressure tracings. The presence of an elevated diastolic pressure and a large systolic wave is characteristic of tricuspid insufficiency. A persistent diastolic pressure gradient between the right atrium and the right ventricle, right upper figure, indicates tricuspid stenosis. The middle tracing is a recording of withdrawal from the right atrium into the superior vena cava and left subclavian vein. The lower chart is one of oxygen saturation and pressure recordings in the right heart.

*Laboratory Data:* The determinations recorded in Table 1 demonstrated slight bilirubin and bromsulfalein retention. The prolonged prothrombin time noted was reversible by administration of vitamin K. Other coagulation studies, including bleeding time, Lee-White coagulation time, and clot retraction time were normal. The differential blood count, urinanalysis, uric acid, and acid phosphatase were unremarkable. Pathological amounts of 5-hydroxyindoleacetate acid were found on several urine determinations.

Diminished amplitude of the QRS complexes was seen on the electrocardiogram. Prominent P waves in the limb leads suggested atrial hypertrophy. Chest x-ray revealed moderate hyperaeration of the lungs and perihilar congestion. The heart was moderately enlarged with a prominent left ventricular contour. The aorta was elongated and calcification was present in the aortic knob. Upper gastrointestinal and small bowel x-rays outlined a normal appearing esophagus, stomach and duodenal bulb. A large diverticulum was present in the third portion of the duodenum. There were multiple diverticula of the jejunum and ileum. A barium enema demonstrated several diverticula of the sigmoid and spacity of the cecum.

An aspiration needle biopsy of the liver was performed through an intercostal approach without incident. The pathological specimen was considered compatible with carcinoid metastic to the liver.

In order to better study the cardiovascular abnormalities associated with the functioning carcinoid syndrome and because of the clinical evidence of tricuspid insufficiency, cardiac catheterization was performed. Due to technical difficulties the catheter could not be passed into the pulmonary artery. The pressure and oxygen saturation results are reported in Figure 1. The right ventricular pressures were normal. The absence of elevated pressures in the right ventricle was felt to exclude significant pulmonary stenosis at the time of the examination.[45] Right atrial pressure curves revealed a large systolic wave to be present. There was likewise elevation of the right atrial diastolic pres-

sure. These two findings were considered characteristic of tricuspid insufficiency.[46] The presence of a significant pressure gradient throughout diastole between the right atrium and the right ventricle was indicative of a significant degree of tricuspid stenosis.[47] The absence of any increase in oxygen saturation in the right atrium and right ventricle excluded a left to right intracardiac shunt. The catheterization findings were felt to indicate the presence of tricuspid stenosis and tricuspid insufficiency.

An exploratory laporotomy was performed on April 24, 1957. Upon opening of the abdominal wall the posterior rectus sheath was thickened with dense fibrous tissue. Marked intestinal motor hyperactivity was observed throughout the operation. A constricting carcinoid of the terminal ileum was resected. Disseminated peritoneal, mesenteric, and hepatic metastasis precluded additional resection. The postoperative course was complicated by intra-abdominal bleeding which necessitated ligation of a bleeding site on the liver.

For one month following operation, the patient experienced a transitory decrease in severity of the diarrhea. Progressive weight loss, diarrhea, weakness and cardiac decompensation prompted three subsequent hospital admissions. Dietary manipulations, digitalis and diuretics were without notable therapeutic effect. A trial of benzyl analogue of serotonin (1-Benzyl-5-dimethylserotonin hydrochloride) in doses of 100 mgs per day and promazine 200 mgs per day produced only minimal symptomatic relief. Side effects, predominantly lethargy, hypotension and drowsiness, necessitated discontinuence of these drugs. These therapeutic measures were unavailing and the patient expired on September 9, 1957.

At post mortem examination, both pleural cavities contained 700-800 cubic cm. of clear yellow serous fluid. The lungs demonstrated moderate hyperaeration with slight bilateral basilar atelectasis. The pericardium contained 100 cubic cm. of serous fluid. The heart weighed 360 gms. The right ventricle measured 0.5 cm. in thickness and the left ventricle measured 1.3 cm. in thickness. The tricuspid and pulmonary valves were thickened and their cusps fused. They measured 11 cm. and 5.5 cm. in circumference respectively. There was moderate contraction of the pulmonary outflow tract. The endocardial surface of the right atrium was thickened. A lesser degree of endocardial thickening was present in the right ventricle. There was marked coronary atherosclerosis without evidence of coronary occlusion. Upon opening the peritoneal cavity 300 cubic cm. of clear amber fluid was found. Numerous adhesions were seen throughout. The liver was markedly enlarged and appeared studded with nodules. These were umbilicated and reddish yellow in color and many were filled with hemorrhagic fluid. Their size varied from 3 to 7 cm. in diameter. Large matted lymph nodes were found throughout the mesentery and about the arterial system. Several yellowish nodules were present in the rectovesical pouch. The anastomotic site presented no evidence of recurrence.

Microscopic section of the liver revealed extensive areas of metastatic involvement by sheets, cords and nests of uniform neoplastic cells. These had deeply staining basophilic nuclei and scanty cytoplasm. Some pseudo-rosette formation was noted. The neoplastic cell nests were separated by fibrous trabeculae. The argentaffine reaction was demonstrated in these specimens. A similar microscopic picture was evident in the remainder of the metastases. A typical microscopic section is demonstrated in Figure 2. In the heart marked endocardial fibrosis and fibroblastic proliferation was noted in the right atrium and right ventricle.

*Case III.* A 42 year old white man was admitted to the Oklahoma City Veterans Administration Hospital in May, 1957. For three years preceding hospitalization the patient had experienced episodic dyspnea and wheezing. Approximately 18 months preceding this hospital admission, a hemorrhoidectomy had been performed. Following this procedure, borborygmus, cramping abdominal pain, and diarrhea consisting of four to five watery stools per day developed. In 1956, the patient began to experience episodic flushing of the skin of the face and neck with associated pruritus of these areas.

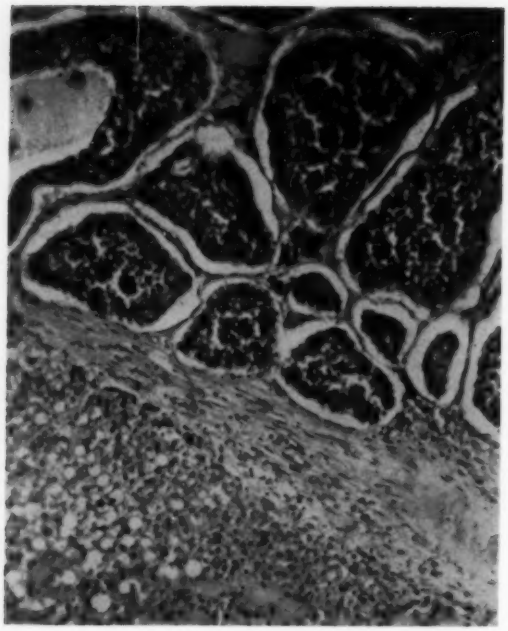


Figure 2. Photomicrograph of hepatic metastases in Patient II. A section of hepatic parenchyma is evident in the lower portion of the section. Above this are nests of neoplastic cells. Some pseudorosette formation is evident. A similar picture was seen in biopsy specimens from the other two patients.

The attacks usually occurred postprandially. A 15 pound weight loss had been incurred during the preceding year. Physical examination revealed a temperature of 98 degrees, pulse 72, respirations 22, and blood pressure 116/60. The patient appeared well nourished and had a persistent reddish purple discoloration of the face, neck and upper chest. Considerable facial telangiectasia was present. The neck veins were slightly distended in the upright position, but did not pulsate. There was a moderate diminution of chest expansion, but examination of lungs was otherwise unremarkable. The heart was not enlarged to clinical examination, but a faint systolic murmur was audible over the manubrium. A smooth liver edge was felt 5 cm. below the right costal margin. No abdominal masses could be felt. Hepatic pressure produced a marked increase in facial flushing. Ascites and pedal edema were absent.

*Laboratory Data:* The determinations included in Table 1 were essentially unremarkable, except for the demonstration of increased amounts of urinary 5-hydroxyindoleacetic acid. Other studies including differential blood counts, urinanalysis, febrile agglutinations, and serum amylase were normal. Pulmonary function studies demonstrated a normal tidal volume, minute volume, and inspiratory capacity. There was a moderate decrease in expiratory reserve and total vital capacity. The maximum breathing capacity was one-half of the predicted value.

A chest x-ray revealed no pulmonary abnormalities. The heart did not appear enlarged but there was some prominence of the left ventricular contour. Examination of the upper gastro-intestinal tract by x-ray outlined a normal appearing esophagus. The antral gastric mucosal folds were slightly prominent. There was slight prolapse of the gastric mucosa into the duodenal bulb. The small bowel showed a normal position and mucosal pattern but there was a rapid progression of the barium meal which reached the splenic flexure within 30 minutes. After four hours all the barium had reached the large bowel. There was no evidence of an intrinsic mass of the small intestine. Examination of the large intestine by barium enema revealed a small diverticulum of the descending colon. The colon and appendix filled with ease and did not appear abnormal. On post evacuation films some non-specific irregularity of the mucosal pattern of the sigmoid colon was noted. An electrocardiogram was unremarkable.

On June 5, 1957, an exploratory laparotomy was performed. A 2 cm. constricting mass was excised from the terminal ileum. The liver was studded with multiple nodules, varying from 1 to 10 cm. in diameter. The microscopic diagnosis was carcinoid, primary in the ileum, with lymph node and hepatic metastases.

After an uneventful post operative course, the patient chose to be followed at a Veterans Administration Hospital closer to his home but reports he has experienced no change in symptomatology.

## Discussion

Since Lubarsch's initial report in 1884[11] and the introduction of the term "carci-

noid," by Oberndorfer[15] in 1907, these tumors have been a source of interest to the pathologist because of their peculiar cell type and unusual staining properties.[16] The synonym, argentaffinoma, is derived from the production of the argentaffine reaction, i.e., blackening of the tumor by ammoniacal silver nitrate.[17] Carcinoids are believed to originate from the Kultschitsky cells of the intestinal epithelium which they resemble in both morphologic and histochemical characteristics.[18] Microscopically the tumors consist of columns and clumps of epithelial cells set in a stroma of muscle and large quantities of elastic tissue.[19, 20] The tumors usually appear as small submucosal nodules, however, they may be constricting or annular.[21] Upon gross examination the tumors are most often yellow, but may vary from grayish white to brown. Their characteristic mode of infiltration of the intestinal wall frequently produces kinking of the ileum. This valuable diagnostic sign occasionally may be observed in x-ray examination of the small intestine.[22]

Carcinoids may arise from any portion of the gastro-intestinal tract from the gastric cardia to the anus. The incidence in necropsied cases varies from 0.14 per cent to 0.34 per cent in five large series.[21, 23, 24, 25, 26] The most frequent site of origin is the appendix with the jejuno-ileum as the next most common site.[27] Carcinoids of the small intestine are most apt to metastasize while those in the appendix rarely do.[28]

One of the earliest descriptions of the carcinoid syndrome was presented to the Royal Society of Medicine in London in 1930 by Sir Maurice Cassidy as an example of metastatic carcinoma to the adrenal gland.[30] The same author presented a second similar case to the same society four year later.[31] The clinical descriptions and a color illustration of the first patient's facies leave little doubt that this represented an example of the carcinoid syndrome. The significance of these and other less definite examples was overlooked until 1953. At this time, simultaneous reports by Biorck, Axen, and Thorson[1] and Isler and Hedinger,[2] aroused a flurry of interest in an unusual syndrome manifested by carcinoids having hepatic metastases. Subsequently, numerous cases showing the unique features which have been enumerated above were reported. It was Thorson, Biorck, Bjorkman, and Waldenstrom,[5] however, who first postulated that the clinical manifestations might be due to the production of large amounts of 5-hydroxytryptamine by the tumor.

It had earlier been shown that the Kultschitzky cells of the intestinal mucosa secreted a substance, "Enteramine," important in maintaining gastro-intestinal tonus. A potent vasoconstrictor termed "serotonin," likewise had been isolated. These two substances have been determined to be 5-hydroxytryptamine.[32, 33] This pharmacodynamic compound has been shown to increase the gastro-intestinal tone and produce hyperperistalsis and diarrhea.[34] It causes constriction of the bronchioles, pulmonary arterioles and produces elevation of the pulmonary artery and right ventricular pressure.[35, 36] 5-hydroxytryptamine also constricts the afferent glomerular arteriole and functions as an antidiuretic.[37] Its effect on the peripheral vascular bed is that of dilatation of the small subcutaneous arterioles and constriction of the larger arteries.[38] Finally, 5-hydroxytryptamine is thought to play a role in cerebral function, which is to date incompletely understood.[39]

The metabolic pathway of 5-hydroxtryptamine has been clearly demonstrated by Udenfriend and Titus.[40] The origin of this compound is dietary tryptophan which is hydroxylated within the tumor or intestinal Kultschitzky cells to 5-hydroxytryptophan. The 5-hydroxytryptophan is then decarboxalated within the tumor or intestinal epithelium to form 5-hydroxytryptamine. This compound is secreted into the portal blood where it is avidly absorbed by the platelets and is transported in an inactive form. Uncombined 5-hydroxytryptamine is converted by monoamine oxidase, present in the lung and liver, to 5-hydroxyindoleacetic acid. This final breakdown product, 5-hydroxyindoleacetic acid, is excreted in the urine.[11, 41] The 5-hydroxyindoleacetic acid pathway of tryptophan metabolism is outlined in Figure 3. The normal daily excretion of 5-hydroxyindoleacetic acid varies from two to nine mgms per day.[42] This is markedly increased in the carcinoid syndrome.

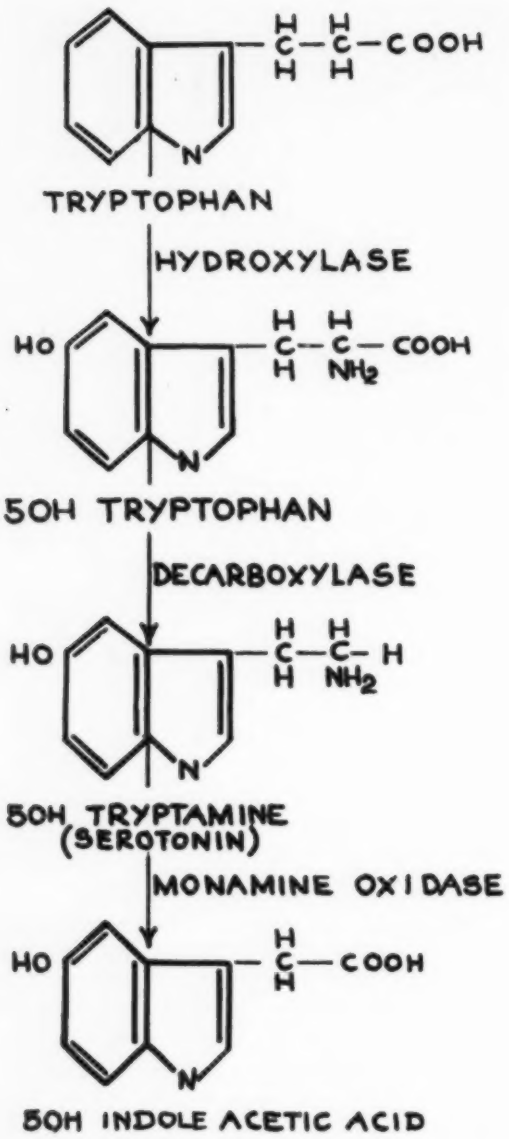



Figure 3. The 5-hydroxyindole pathway of tryptophan metabolism from Sjoerdsma, et al, Amer. J. Med., 33:5, 1957, p. 520.

In the "Carcinoid Syndrome," large quantities of tryptophan, the percursor of 5-hydroxytryptamine, are converted into the previously mentioned anomalous metabolic pathway. As much as sixty per cent of dietary tryptophan has been shown to be diverted into "serotonin" metabolism. This results in a considerably decreased amount of tryptophan available for niacin and protein formation.[11] Tryptophan deficiency occurring in the carcinoid syndrome is frequently manifested by hypoproteinemia and clinical evidences of pellagra.

The three patients described in this report presented the classical findings of the functioning carcinoid syndrome. The evident manifestations are summarized in Table 2. In each instance, the clinical impression was verified by the simple urinary 5-hydroxyindoleacetic acid determination described by Sjoerdsma and colleagues. This test may be performed in any clinical laboratory as follows:

0.2 milliliter urine

0.8 milliliter water

0.5 milliliter 1 nitroso-2 naphthol (0.1% in 95% ethanol)

Mix

0.5 milliliter of nitrous acid (freshly prepared by adding 0.2 milliliter of 2.5% sodium nitrate to 5 milliliters of 2N sulfuric acid)

Re-mix

Allow to stand for ten minutes

Shake with 5 milliliters of ethylene dichloride.

A positive test consists of a purple color in the top layer.[43] A positive result requires a minimum urinary excretion of 4 milligrams of 5-hydroxyindoleacetic acid per 100 milliliters of urine. To date no false positive reactions have been reported in normal subjects and in various disease states.[42]

## Summary

Three patients with malignant carcinoid tumors metastatic to the liver are presented. The recently described clinical syndrome evidenced by these patients is described and the clinical, laboratory, and cardiac catheterization findings are discussed.

A review of the features of carcinoid tumore and more specifically as the "functioning carcinoid syndrome" is presented. Certain physiological and biochemical aspects of this syndrome are discussed.

## Addendum

The author wishes to express his gratitude to Doctor Walter Joel, Department of

Table 2

| Clinical Manifestations | Case I | Case II | Case III |
|---|---|---|---|
| Facial Telangiectasia | Present | Present | Present |
| Flushing Episodes | Present | Present | Present |
| Diarrhea | Severe | Severe | Moderate |
| Asthma | None | None | Mild |
| Heart Murmur | Tricuspid Systolic | Tricuspid Systolic | Basilar Systolic |
| Hepatomegaly | Yes—palpable nodules | Yes—palpable nodules | Yes |
| Additional Palpable Abdominal Masses | Yes | Yes | None |
| Primary Site | Unknown | Ileum | Ileum |
| Hepatic Metastases | Yes—needle biopsy | Yes—needle biopsy and laparotomy | Yes—laparotomy |

Pathology, University of Oklahoma School of Medicine, for review of the pathological specimens. The various roentgenograms were interpreted by the members of the Departments of Radiology of the University of Oklahoma Medical Center and the Oklahoma City Veterans Administration Hospital.

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## President Cross Addresses Graduating Class

*The following is President George L. Cross's Commencement Address to the University of Oklahoma School of Medicine Graduating class of 1958.*

Members of the Class of 1958, members of the faculty of the University of Oklahoma School of Medicine, distinguished guests, parents and friends of the University—

Sixty-six years ago in September of 1892, a group of men and women of varying ages presented themselves in Norman as the first student body of the University of Oklahoma. There were 56 members of this beginning class, and they were welcomed by a faculty of four, including the President of the University, Dr. David Ross Boyd. The physical plant of the institution that fall consisted of a single room upstairs in a building on the Main Street of Norman. There were no pre-medical students in this group. As a matter of fact, few if any of the group could qualify for admission at the collegiate level. The first years of the University's existence was concerned primarily with preparatory activities.

Six years later, in 1898, a few courses known as pre-clinical courses were organized unofficially. There were courses in chemistry, toxicology, anatomy, physiology, materia medica and therapeutics. These were taught in the scientific departments of the University and in the School of Pharmacy. They were the prelude to our School of Medicine.

In 1900 these courses were officially designated by the Regents of the University as a "Pre-clinical Medical School," and a Department of Pathology was added. The campus of the University had begun to take form in its present location, and a one-story wooden building was erected to house the Department of Anatomy. Laboratory space was set aside in Science Hall for pathology and bacteriology. Only the first two years of a full medical course were given. The clinical years had to be taken elsewhere. The first pre-clinical class got underway in September, 1901 with an enrollment of eight students.

In 1904 the Board of Epworth University, located in Oklahoma City, organized a faculty for its College of Medicine, and in 1906 a full four-year course was established with students accepted for all classes.

In 1910 plans were made for a merger of this Medical College with the University of Oklahoma. The merger was accomplished, and the University of Oklahoma acquired a ready-made medical school with a student body of 47. The first degrees were conferred in 1911.

The present location of the Medical School was determined in 1917 when the Oklahoma Legislature appropriated funds for the con-

struction of the University Hospital. Additional Legislative appropriations in 1927 made provision for the Crippled Childrens Hospital and the Medical School Building. With the completion of these structures the Pre-Clinical Departments were moved from Norman to the Oklahoma City campus in 1928.

In the years which have intervened since that time, the School has had its ups and downs, but the end result as of 1958 is a Medical Center in which all Oklahomans can and do take a great deal of pride.

I should like to express appreciation on behalf of the University and personally to the members of the faculty, pre-clinical and clinical, and to the deans, whose loyal devotion and effective service have made this growth possible.

I should like to single out for special attention the many Oklahoma City physicians who have given so generously of their time and talents in the development of our School of Medicine. Without their great contribution of teaching, research and administration, a program of medical education could not have been developed in Oklahoma.

We have assembled here today to honor the latest products of our School of Medicine. We have planned a special ceremony for this purpose because we want to be sure that each graduate this spring receives the recognition he deserves.

It is a very great pleasure to welcome to these exercises all who will receive degrees and diplomas this afternoon. It is a pleasure also to welcome the parents, families and friends of the graduating group. It is a pleasure to welcome the faculty of the School of Medicine. It is a pleasure to welcome several distinguished guests who have an interest in our medical program.

# FACULTY NEWS

## Gilbert S. Campbell, Ph.D., Joins VA Hospital Staff

*Gilbert S. Campbell, Ph.D.*, of Minneapolis, Minnesota, has been appointed as Chief of Surgical Service at the Veterans Administration Hospital, Oklahoma City, Oklahoma, and Professor of Surgery at the University of Oklahoma.

Doctor Campbell is a native of Virginia and received M.D. degree from University of Virginia School of Medicine in 1946. He received residency training in Surgery at the University of Minnesota Hospital, Minneapolis, Minnesota, completing his training in February 1954. He is certified by the American Board of Surgery and Board of Thoracic Surgery. He has been Assistant Professor of Surgery at the University of Minnesota since July 1955. He was a consultant in Surgery at the Veterans Administration Hospital, Minneapolis, Minnesota. He has a Ph.D. degree from the University of Minnesota in surgery and minor in physiology. He was granted a Markle Scholarship in 1954.

He is a member of the Society of University Surgeons; American Association for Thoracic Surgery; Sigma XI; American Association for Advancement of Science; and Society of Experimental Biology and Medicine.

Doctor Campbell has served as Medical Officer assigned to Walter Reed Hospital from July 1949 to July 1950, and served in the Far East, Japan, and Korea as Medical Officer in the Army from July 1950 to August 1951. He was separated from the Service in August 1951 as Captain.

Doctor Campbell is interested in cardiopulmonary function and has over 40 publications in relation to problems dealing with ventilation, pulmonary blood flow, and cardiac arrest.

# ABSTRACTS

### Transplacental Infection of Fetuses of Rabbits with Herpes Simplex Virus

JOSEPH Z. BIEGELEISEN, Jr.* and L. VERNON SCOTT.**

Proc. Soc. Exp. Biol. & Med., 97: 411-412, 1958

In a continuation study of the dissemination of herpes simplex virus after infection of the cornea of the adult rabbit this virus was isolated from the fetuses.

Herpetic lesions were produced on chorioallantoic membranes of developing chick embryos (CAM) which were inoculated with blood specimens removed at 24 hours and 48 hours after corneal inoculation and at the time the fetuses were surgically removed (54 hours) from the infected animals. Typical herpes simplex virus plaques were noted on CAM which were inoculated with homogenates of fetuses from these animals.

The infectivity for CAM of the viral agent which was isolated from the fetuses was decreased when titrated in the presence of specific immune serum. The agent's infectivity for CAM was not decreased in the presence of buffered gelatin saline. Therefore, the isolated virus was identified as herpes simplex.

*Graduate Student, Department of Microbiology.
**Associate Professor of Microbiology.

## Castration, Thyroidectomy and Parabiosis in Rats with Particular Reference to the Pituitary Basophil Cells and Their Hormone Products

LAURENCE G. GUMBRECK.*

Am. Jour. Anat. 101: 321-365, 1957

The primary object of this study was to determine the hormonal output of the pituitary gland of the male rat when it was altered by castration, thyroidectomy or both operations combined. These operations caused an increase in the pituitary basophil cells and a decrease in the acidophil cells. The male rats operated on were united in parabiosis with a normal female rat (surgical siamese twins). Such twins develop a circulatory connection of capillary vessels, so that hormones and other blood-borne products from one twin or partner will circulate in the other.

The target organs of the hormones produced by the pituitary basophil cells were examined quantitatively in the normal female partners. When the male partner was thyroidectomized the thyroids of the female, but not the ovaries, were stimulated. When the male was castrated the ovaries of the female were stimulated and the thyroids were first stimulated and then depressed. When the male was subjected to both operations the ovaries and the thyroids were stimulated, but the thyroids were stimulated to a greater degree than when the male was only thyroidectomized.

From these results and certain others the following conclusions have been drawn. Castration caused a marked increase in the output of follicle-stimulating hormone and a decrease in the release of thyrotrophic hormone. Thyroidectomy caused an increase in the output of thyrotrophic hormone but had no appreciable effect on follicle-stimulating hormone. Neither castration nor thyroidectomy appeared to increase the release of luteinizing hormone. Also, when the male partner was castrated, with or without thyroidectomy, the thyroids of the female were altered as a result of the increased estrogen production of her stimulated ovaries. These changes indicated first an increase followed by a decrease in thyroid activity.

Secondary objects of the study were to determine the quantitative effects of castration, thyroidectomy and both operations combined in the male rat and those of parabiotic union of a normal male and female rat, since these animals served as controls. In these animals and all others the following quantitative data were obtained: body weight, weights of endocrine glands, accessory sex organs, thymus, kidneys and spleen, cell height index of thyroids, percentage of all types in the anterior lobe of the pituitary, hemoglobin content of blood, and blood pressure. It should be noted that blood pressure was not appreciably altered by either castration, thyroidectomy or parabiosis.

*Assistant Professor of Anatomy, formerly Research Associate in Surgery, Washington University School of Medicine, St. Louis.

## Waldenstrom's Macroglobulinemia Clinical and Pathological Report of a Case Resembling Multiple Myeloma

JAMES W. HAMPTON.*

New England J. of Med., 258: 1293, June 26, 1958

In 1944 Waldenstrom described a clinical syndrome characterized by a hemorrhagic diathesis, leukopenia and the presence of an abnormal protein of large molecular weight. This report concerns a patient who showed all the classic features of the syndrome. The patient presented a picture of progressive pancytopenia, hyperglobulinemia and a hemorrhagic disorder. The fact that a heavy, white flocculum formed when a drop of the patient's serum was added to distilled water prompted an analysis of the serum by ultracentrifugation. Twenty per cent of the total protein was shown to be a macroglobulin with Svedberg constant of 19. The total illness of the patient was eight months, and death resulted from a massive intracranial hemorrhage.

*Resident, Department of Medicine, University of Oklahoma and VA Hospital.

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## Chlorpromazine Jaundice: The Effect of Continued Chlorpromazine Ingestion in The Presence of Chlorpromazine Jaundice

E. M. SCHNEIDER,* C. DAUGHERTY,** and J. K. DeVORE.***

South. M. J., 51: 287-291 (March) 1958

It has been estimated that jaundice occurs in approximately 1% of all patients receiving chlorpromazine. This jaundice has the character of an intrahepatic obstructive lesion. Treatment is largely empirical, but it is generally accepted that, when jaundice appears, the drug must be withdrawn. The present report is based on a study of four patients in whom the administration of chlorpromazine was continued without change after the appearance of jaundice. All four patients were inmates of a state mental hospital; three were women and one a man. All four patients had been receiving chlorpromazine in dosages of 150 to 200 mg. per day for 25 to 39 days prior to the appearance of jaundice. In each instance, chlorpromazine was continued without change in dosage until all clinical and laboratory evidence of jaundice had disappeared. On three of the four subjects, laboratory studies and biopsies of the liver specimens were obtained within three to five days of the appearance of jaundice. In patient two there was a 12-day interval between the onset of icterus and the initial laboratory study. An attempt at liver biopsy on this patient was unsuccessful. A second series of liver function tests was obtained on all patients 10 to 21 days after the initial observations. A third battery of hepatic function tests, together with

liver biopsies on all subjects except patient two, was performed 42 to 68 days later and was the final study on subjects two, three and four. Patient one was subjected to one additional series of liver function tests 151 days after the onset of jaundice.

Elevations of serum alkaline phosphatase and serum bilirubin levels were noted in all subjects initially. The bilirubin levels tended to return to normal somewhat earlier than dide the alkaline phosphatase levels. In all patients serum lipid phosphorus determinations were higher during jaundice than after recovery. Liver biopsies were available on three of the four subjects during and again after clearing of jaundice. Bile canalicular plugging and periportal infiltration were noted in two subjects on the first biopsy but were normal on repeat examination. The third subject showed only some fatty change in both biopsies. In the present group of patients chlorpromazine therapy was continued with impunity after the appearance of chlorpromazine jaundice. The possibility of chlorpromazine inducing changes in bile viscosity or composition and in biliary sphincter tone was neither supported nor refuted by this study. However, the available data do cast doubt on the likelihood of chlorpromazine jaundice being due to hepatotoxicity or chlorpromazine sensitivity or to existing hepatic disease.

*Former Assistant Chief, Medical Service, VA Hospital, Oklahoma City.

**Psychiatrist, Western State Hospital, Fort Supply, Oklahoma.

***Clinical Assistant in Medicine, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

## Review of Cases of Nontuberculous Disease Originally Diagnosed Pulmonary Tuberculosis

RICHARD M. BURKE* and JAMES A. WIER.**

American Review of Tuberculosis and Pulmonary Disease, 75: 921-937, 1957

Over a three year period 608 (18%) of the patients admitted to the tuberculosis section of Fitzsimons Army Hospital were found not to have tuberculosis. Ten conditions composed 77% of the total lung disorders encountered. They were, in order of frequency: pulmonary fibrosis, pneumonia, bronchiectasis, histoplasmosis, coccidioidomycosis, pleurisy, malignancy, sarcoidosis, granuloma (etiology undetermined) and lung abscess. The great importance of the tuberculin test and sputum culture is emphasized. Forty per cent of the patients were tuberculin negative and 12% had "false" sputum reports. The need for prompt biopsy in obscure lung lesions is stressed.

*Assistant Professor of Medicine.

**Colonel, Medical Corp, Fitzsimons Army Hospital, Denver, Colorado.

## Trends in the Treatment of Tuberculosis

RICHARD M. BURKE.*

Southern Medical Journal, 49: 725-730, 1956

The introduction of antimicrobials in the treatment of tuberculosis has brought many changes. Older measures are being discarded or modified as an increasing dependence is placed on drugs.

The present treatment of active tuberculosis centers around long-term continuous drug therapy. Surgical removal of significant residua when feasible is favored. However, a growing confidence in drug therapy is leading to fewer restrictions for small residual lung foci. The management of the patient is best handled in a hospital where a sheltered supervised environment is provided. After stability of the lesion has been achieved, home care can be substituted. Prolonged bed rest is assuming a minor role.

*Assistant Professor of Medicine.

## Gastric Secretion as Influenced by Rauwolfia Alkaloids

EDWARD M. SCHNEIDER,* and MERVIN L. CLARK.**

Annals of Internal Medicine, 47: 640, October 1957

Rauwolfia and its various alkaloids have been recommended in the treatment of gastrointestinal syndromes because of their tranquilizing effects, but their stimulating effects on gastric secretion made it difficult to determine the indications for their use.

In this study various Rauwolfia Alkaloids were studied in reference to their effects on gastric secretion. Intravenously, 1 mg. of reserpine evokes a significant and prolonged hyperchlorhydria. This response was not blocked by atropine, methantheline bromide, epinephrine or vagotomy. Oral doses of Rauwolfia Alkaloids induced gastric hypersecretion when given in large (2.5 mg.) single doses, but smaller doses did not influence gastric secretion. When Rauwolfia serpentina (200 mg./day) or reserpine (1 mg./day) was given orally over 14-day periods, no significant alteration in gastric secretion or uropepsin excretion occurred.

Rauwolfia serpentina and phenobarbital were found to have no greater value therapeutically in patients with duodenal ulcer or functional gastrointestinal disease than did an inert placebo.

Although no proof of their being ulcerogenic exists, it would seem prudent to use large doses of the Rauwolfia alkaloids with caution, especially in patients with peptic ulcer disease.

*Former Assistant Chief, Medical Service, VA Hospital, Oklahoma City.

**Chief of Medicine, Central State Hospital, Norman, Oklahoma, and Assistant Professor of Medicine, University of Oklahoma School of Medicine, Oklahoma City.

## Isolation of Herpes Simplex Virus From the Blood of Rabbits

JOSEPH Z. BIEGELEISEN,* LEE H. RILEY, Jr.** and L. VERNON SCOTT.***

Virology, 4: 182-183, 1957

Herpes simplex virus may be disseminated from the initial foci of infection in the adult rabbit to other organs by the blood.

Typical herpetic lesions were observed on chorioallantoic membranes of embryonated hen's eggs (CAM) which were inoculated with blood specimens from ten rabbits which were infected on the cornea with herpes simplex virus. The virus was isolated from these specimens as early as 24 hours and as long as 132 hours after the experimental inoculation of the animals. That an infection had been established on the virus inoculated eyes was shown by the demonstration of herpetic lesions on CAM which had been inoculated with ocular washings from the infected eyes. No herpetic lesions were observed on CAM which had been inoculated with blood specimens from uninfected animals or with ocular washings from uninfected eyes.

Homogenates of brain, heart, heart's blood, kidney, liver, lungs and spleen from six of these animals which died with herpetic encephalitis produced lesions on CAM.

The infectivity for CAM of the isolated agent from the blood of the rabbits was decreased in the presence of specific immune serum, thus it was identified as herpes simplex virus.

*Graduate student, Department of Microbiology.

**Resident in Surgery, the Johns Hopkins University School of Medicine, Baltimore, Md.

***Associate Professor of Microbiology.

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## The Growth of Sensitive and Resistant Strains of Micrococccus pyogenes in the Presence of Varying Concentrations of Chloramphenicol

H. H. RAMSEY.*

Antibiotics and Chemotherapy 8: 250-254 (1958)

Concentrations of chloramphenicol less than that required for complete inhibition of growth appear to have a greater effect on a resistant organism than on a sensitive strain. This effect is expressed as a lengthening of the initial stationary phase of growth, a decreased growth rate in the exponential phase, and a reduced total growth.

*Associate Professor of Microbiology.

## Identification of Skeletal Remains

ALICE M. BRUES.*

J. Criminal Law, Criminology and Police Science, 48: 551-563, 1958

This paper is designed to acquaint the working law enforcement officer with the type of information which can be gleaned from skeletal remains, and the certainty with which conclusions can be drawn. Cautions to be observed in handling the material are discussed, and the suggestions are made as to the most useful procedures in handling the anthropological investigation as a part of the total investigation.

Specific topics discussed are (1) determination of the time and cause of death (outside the strict limits of the anthropologist's field) (2) interpretation of the condition in which the remains are found (3) identification of the species as human (4) estimation of age (5) determination of sex (6) estimation of stature (7) diagnosis of race and (8) identification of individual features.

*Associate Professor of Anatomy.

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## Treating Tuberculosis in a Military Hospital

RICHARD M. BURKE* and JAMES A. WIER.**

United States Armed Forces Medical Journal, 8: 963-971, 1957

This paper reports the experiences of a large tuberculosis service in treating three groups of patients: military, veterans, and civilian dependents. The military were young men with recent disease. Irregular discharges were insignificant because of army disciplinary powers. This is a sharp contrast to the VA patients with an irregular discharge rate of 30%. The civilian dependent irregular discharge rate was 8%.

In 1954, 50% of the military treated to maximum hospital benefits had pulmonary resection. Since then, operation has been employed less frequently. After three years of active duty, the relapse rate has been only 3%. The present program in operation since 1951 puts the service man back on duty in a relatively short time, he is no longer separated from service and pensioned for life.

*Assistant Professor of Medicine.

**Colonel, Medical Corp, Fitzsimons General Hospital, Denver, Colorado.

# PRESIDENT'S LETTER

September is a month that is of special significance to most of us. Vacations are over and the summer is rapidly drawing to a close. For our junior citizens it marks the beginning of a new school year, and for the average doctor it means several things —more concentrated effort in the practice of medicine, more medical meetings, and the often overlooked opportunities in medical education.

It is extremely easy to follow the lines of least resistance and plod along day after day depending on our basic medical training, supplemented only by the periodic visits of a pharmaceutical representative. But such a course will not for long give the patient the full measure of professional care to which he is entitled. Fortunately there are only a few who follow such a superficial program.

The need for continuous and progressive medical education is endless and has no regard for long hours and hard work. If we are to keep abreast of today's rapid progress in medicine, it is mandatory that some time be set aside every year to return to the classroom.

During the next nine months, there will be numerous courses of study offered in our leading medical centers, many within easy distance. Already our own University of Oklahoma Medical School has some eighteen separate courses to offer, totalling almost two hundred hours.

This is the month to plan your postgraduate medical education for the year. Plan it carefully and positively.

E. G. Nichols M.D.

President

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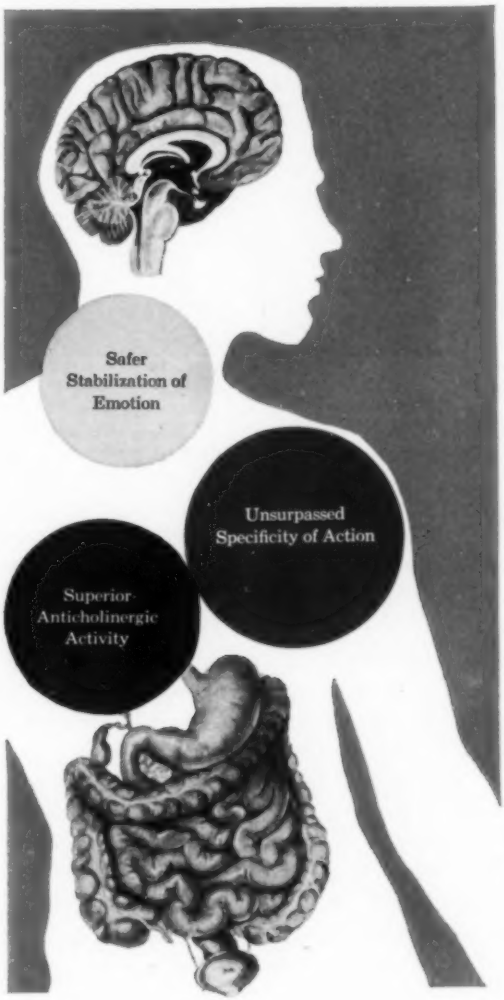


**PRO-BANTHINE WITH DARTAL** offers you a new, specific and reliable control of visceral motor disorders, especially when these disorders are induced or aggravated by psychic tensions or anxiety.

**Pro-Banthine** has won wide clinical acceptance as the most effective drug for controlling gastrointestinal hypermotility and hypersecretion.

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The combination of each drug in fully effective doses in Pro-Banthine with Dartal gives a new means of approach to the medical management of functional gastrointestinal disorders mediated by the parasympathetic nervous system.

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# Medical News

## Date Set For Fall Clinical Symposium in Tulsa

Seven nationally known medical personalities will appear as visiting guest speakers at a Fall Clinical Symposium on Thursday, October 9, 1958, at Hotel Tulsa, Tulsa, Oklahoma.

Jointly sponsored by the Tulsa Academy of General Practice, the Tulsa County Medical Society and Lederle Laboratories, the one-day postgraduate study event will feature presentations by the following physicians: Jackson A. Smith, M.D., Professor of Psychiatry and Neurology, University of Nebraska College of Medicine, Omaha Nebraska; Alfred B. Longacre, M.D., Assistant Professor of Surgery, Louisiana State University School of Medicine, New Orleans, Louisiana; Edward M. Litin, M.D., Associate Professor of Pediatrics, The Mayo Clinic Foundation, Rochester, Minnesota; Frank C. Wheelock, Jr., M.D., Assistant Professor of Surgery, Harvard University Medical School, Boston, Massachusetts; Edmund L. DuBois, M.D., Assistant Professor of Medicine, University of Southern California School of Medicine, Los Angeles, California; Milton H. Erickson, M.D., Associate Professor of Psychiatry, Wayne University College of Medicine, Phoenix, Arizona; and C. Joseph Stetler, LL.B., Director, Law Department, American Medical Association, Chicago, Illinois.

All medical doctors are invited and urged to attend. There is no registration fee, and the Symposium has been approved for five hours formal credit in Category I by the American Academy of General Practice. Several hundred doctors of Oklahoma, Arkansas, Kansas and Missouri are expected to attend.

A complimentary luncheon for physicians and wives will feature an address on "Emotional Problems of Parents and Children" by Docton Litin. The Symposium will conclude with a complimentary social hour. All sessions are being held in Hotel Tulsa.

Doctor Jackson A. Smith, Professor of Psychiatry at the University of Nebraska College of Medicine, Omaha, will be one of seven distinguished guest speakers at the Fall Clinical Symposium in Tulsa, October 9.

Special entertainment has been arranged by the Auxiliary to the Tulsa County Medical Society for visiting wives. The principal feature of this will be a hat show.

A complete program will be mailed to all doctors in mid-August. Reservations for hotel rooms should be made directly with Hotel Tulsa.

Doctor Jackson A. Smith will discuss "Emotional Problems in the Geriatric Patient." The subject of Doctor Milton H. Erickson will be "The Uses of Hypnosis in Medicine." Doctor Edmund L. DuBois will discuss "Newer Steroids, Newer Uses." Doctor Frank C. Wheelock's subject is "Newer Concepts of Vascular Surgery." Doctor Alfred B. Longacre will discuss "A Tenth Anniversary Reappraisal of Broad Spectrum Antibiotics."

Because of the growing volume of malpractice suits in the United States, Mr. C. Joseph Stetler, Director of the Law Department of the American Medical Association, was selected for a special presentation on "Medico-Legal Problems in Private Practice."

Doctor Charles E. Wilbanks, President of the Oklahoma Chapter of the American Academy of General Practice, Tulsa, will preside at the morning session. Doctor Hugh Perry, Tulsa, President of the Tulsa County Medical Society, will preside at the afternoon session. Doctor Elmer E. Ridgeway, Jr., Oklahoma City, will be Chairman for the luncheon meeting.

The Committee On Arrangements includes Doctor Wilbanks, Doctor Marshall O. Hart, Doctor Earl M. Lusk, Doctor Harlan Thomas, Doctor Vance Lucas, Doctor Leo Lowbeer, Doctor Lucien M. Pascucci, and Doctor Sol Wilner.

## Program Completed For Colloquy On Advance in Medicine

The Second Oklahoma Colloquy on Advances in Medicine will be held on November 12, 13, 14, and 15 in the auditorium at the University of Oklahoma School of Medicine. Devoted to Arthritis and Related Disorders, the colloquy is under the joint sponsorship of the Department of Medicine, University of Oklahoma, Geigy Pharmaceuticals, Wyeth Laboratories, The Upjohn Company, Pfizer Laboratories, Schering Corporation, and Oklahoma Chapter, Arthritis and Rheumatism Foundation.

The following program has been planned:

**WEDNESDAY, NOVEMBER 12**

Morning Session
Presiding: J. P. Colmore, M.D.
Associate Professor of Medicine
Director in Charge of Outpatient Clinic
O.U.

9:00-9:10—Introduction
Stewart G. Wolf, M.D.
Professor and Head, Department of Medicine
O.U.

9:10-9:50—RECENT ADANCES IN PURINE METABOLISM IN RELATION TO GOUT
Alexander B. Gutman, M.D.
Director, Department of Medicine, Mount Sinai Hospital, New York, New York

9:50-10:30—THERAPEUTIC ASPECT OF GOUT
John H. Talbott, M.D.
Professor of Medicine, University of Buffalo School of Medicine, Buffalo, New York

10:30-10:45—Intermission

10:45-11:25—THE CONCEPT OF SECONDARY GOUT
Doctor Gutman

11:25-12:30—Questions and Answers

Afternoon Session
Presiding: James F. Hammarsten, M.D.
Associate Professor of Medicine
Chief, Medical Service
Veterans Administration Hospital
O.U.

1:30-2:10—SELECTED ASPECTS OF CONNECTIVE TISSUE DISEASE
Doctor Talbott

2:10-2:50—CLINICAL MANIFESTATIONS OF PROGRESSIVE SYSTEMIC SCLEROSIS AND DERMATOMYOSITIS
Alfred Jay Bollet, M.D.
Assistant Professor of Medicine, Wayne State University College of Medicine, Detroit, Michigan

2:50-3:30—RECENT ADVANCES IN RESEARCH ON SERUM FACTORS IN COLLAGEN DISEASES
Ralph Heimer, Ph.D.
Department of Rheumatology, Hospital for Special Surgery, New York, New York

3:30-3:45—Intermission

3:45-4:15—HEMATOLOGICAL MANIFESTATIONS OF COLLAGEN DISEASES
Robert M. Bird, M.D.
Associate Professor of Medicine and Physiology
O.U.

4:15-5:30—Questions and Answers

6:00—Reception—Faculty House

**THURSDAY, NOVEMBER 13**

Morning Session

Presiding: W. W. Rucks, Jr., M.D.
Associate Professor of Medicine
O.U.

8:30-9:10—EPIDEMIOLOGY OF RHEUMATIC FEVER
Robert W. Quinn, M.D.
Professor and Head of the Department of Preventive Medicine and Public Health, Vanderbilt University, Nashville, Tennessee

9:10-9:50—EXPERIMENTAL BASIS AND RESULTS OF HORMONE THERAPY IN RHEUMATIC FEVER
Vincent C. Kelly, M.D., Ph.D.
Associate Professor, Department of Pediatrics,

University of Utah College of Medicine, Salt Lake City, Utah

9:50-10:30—SOME IMMUNOLOGIC ASPECTS OF RHEUMATIC FEVER
Doctor Quinn

10:30-10:45—Intermission

10:45-11:25—RHEUMATOID DISEASE IN CHILDHOOD
Robert A. Good, M.D.
American Legion Memorial Heart Research Professor of Pediatrics, University of Minnesota, Minneapolis, Minnesota

11:25-12:25—Questions and Answers

Afternoon Session

Presiding: R. W. Payne, M.D.
Instructor in Medicine
Associate Professor of Pharmacology
O.U.

1:30-2:10—THE BASIC MECHANISMS OF RHEUMATOID DISEASE
Thomas McP. Brown, M.D.
The George Washington University Hospital, Washington, D.C.

2:10-2:45—COMPOSITION OF THE RHEUMATOID FACTOR
Morris Ziff, M.D.
Associate Professor of Medicine, New York University College of Medicine, New York, New York

2:45-3:15—SEROLOGICAL TESTS IN RHEUMATIC DISEASES
Doctor Heimer

3:15-3:30—Intermission

3:30-4:00—METABOLISM OF ACID MUCOPOLYSACCHARIDES OF CONNECTIVE TISSUE
Doctor Bollet

4:00-4:30—SERUM GLYCOPROTEIN AND SEROMUCOID IN RHEUMATIC DISEASE
Marvin R. Shetlar, Ph.D.
Associate Professor of Biochemistry
O.U.

4:30-5:30—Questions and Answers

**FRIDAY, NOVEMBER 14**

Morning Session

Presiding: William K. Ishmael, M.D.
Assistant Professor of Medicine
O.U.

8:30-9:15—STUDIES ON THE PHYSICAL AND CHEMICAL NATURE OF NORMAL AND DISEASED CARTILAGE
R. H. Follis, Jr., M.D.
Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, D.C.

9:15-9:45—PSORIATIC ARTHRITIS
Doctor Brown

9:45-10:15—THE ARTERITIS OF RHEUMATOID ARTHRITIS
Doctor Ziff

10:15-10:30—Intermission

10:30-11:15—TREATMENT OF RHEUMATOID ARTHRITIS
C. H. Slocumb, M.D.
Mayo Clinic, Rochester, Minnesota

11:15-12:15—Questions and Answers

Afternoon Session

Presiding: P. C. Johnson, M.D.
Assistant Professor of Medicine
Chief, Radioisotope Service
Veterans Administration Hospital
O.U.

1:30-2:00—DEGENERATIVE JOINT DISEASE
William K. Ishmael, M.D.
O.U.

2:00-2:30—UNDESIRABLE REACTIONS OBSERVED IN THE HYPERCORTISONE STATE
Doctor Slocumb

2:30-3:00—STEROID PSEUDORHEUMATISM AND OTHER COMPLICATIONS OF STEROID HORMONE THERAPY
Doctor Good

3:15-3:30—Intermission

3:30-4:00—INFLUENCE OF SALICYLATE AND OTHER ANTI-ARTHRITIC DRUGS ON STEROID METABOLISM
Doctor Kelley

4:00-5:15—Questions and Answers

**SATURDAY, NOVEMBER 15**

8:30-10:30—BREAKFAST ROUNDUP—Faculty House

1. Practical Considerations in the Diagnosis and Treatment of Arthritis
2. Review, questions and answers
   C. H. Slocumb, M.D.
   Thomas McP. Brown, M.D.
   Morris Ziff, M.D.
   R. W. Payne, M.D.
   William K. Ishmael, M.D.
   Stewart Wolf, M.D.

There will be a registration fee of $25.00 with members of the Armed Forces, interns and residents attending without charge.

On the final day of the meeting, the University of Oklahoma football team will play the University of Missouri at Norman, Oklahoma. Registrants may apply for tickets by writing the Athletic Ticket Office, University of Oklahoma, Norman, Oklahoma.

Further information may be obtained by writing to the Division of Postgraduate Education, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

## The Physician's Role in the Social Security Disability Program

*The following information was sent to the Journal Editor from C. W. Robinson, M.D., Medical Consultant, Oklahoma Division, Social Security Agency, to inform the Oklahoma Physicians on the new Social Security Disability Program.*

Doctors, hospitals, institutions, and agencies who have contact with disabled people are frequently asked these days to fill out medical reports in connection with claims under the disability provisions of the social security law. Under these provisions, disabled workers 50 to 65 years of age, and the disabled dependent sons and daughters of retired or deceased workers, may receive monthly disability payments. Disabled workers under age 50 may have their social security records "frozen." This protects the future benefit rights of the disabled worker and his family.

To qualify under these disability provisions, a person must be unable to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment which can be expected to result in death or to be of long-continued and indefinite duration. A disabled worker must, in addition, have social security credits for work in at least five of the 10 years before he became disabled, including a year and a half out of the three years before his disability began. A disabled child must be both unmarried and dependent, and must have become disabled before his or her 18th birthday.

Applications under the social security disability provisions are taken by the more than 570 social security district offices, located in communities all over the Nation. The social security district office gives the disabled applicant information about his rights, helps him to fill out his application, and to get proofs and documents he may need to support that application. Under the law, the disabled person is responsible for furnishing, at his own expense, the evidence to show that he is "disabled" within the meaning of the social security law.

His social security district office gives him one or more copies of a medical report form on which this evidence can be supplied. He is asked to take or mail this form to his attending physician or to a hospital, institution, public or private agency where he has been treated for his disabling condition. This report form, designed as a guide for the reporting physician, lists the kind of medical facts essential for the determination of "disability." However, the reporting doctor is not required to use it; if he prefers, he may make his report in the form of a narrative summary or he may submit photocopies of the pertinent medical records. The completed reports are to be returned by mail to the social security district office (or to a State agency, if indicated).

By providing a full and objective clinical picture of his patient, the reporting doctor fulfills his responsibility to his patient and, incidentally, expedites the decision. To be of maximum use for the evaluation of a patient's capacity for work, the report should include a history of the impairment, the symptomatology, clinical findings and diagnosis. Obviously, the reporting physician has an important role in the operation of the social security disability provisions. He is not, however, asked to decide the issue of "disability." The determination as to whether a patient is "disabled" must be made within the scope of the social security law; often it is based on evidence from more than one medical source. Also the determination must take into account factors which are not purely medical—factors such as education, training and work experience.

After the applicant has filed his claim under the disability provisions, and furnished the supporting evidence, his case is forwarded by his social security district office to an agency of his State. Under agreements between the individual States and the Federal Government, these State agencies make the disability determinations for their own residents.

In the State of Oklahoma, the agreement with the Federal Government provides for the Department of Public Welfare to make these disability determinations.

The evaluation of disability is made by a

"review team" in the State agency. There are at least two professional people on each team. One of the two is a doctor of medicine; the other is trained in evaluating the personal and vocational aspects of disability. The team must decide whether the applicant is sufficiently disabled to prevent him from engaging in any substantial gainful activity within the foreseeable future.

In many cases it is necessary to write back to the reporting physician because the medical report does not contain enough clinical facts. As a rule, the kinds of medical facts that the attending physician needs in making his diagnosis and in treating his patient are the same as those required to evaluate the severity of impairments in disability programs. However, certain medical facts are more highly significant in disability evaluation than to medical management of the case. To evaluate the effect of the impairment on the individual's ability to work requires the kind of medical evidence that confirms the diagnosis and measures remaining functional capacities of mind and body. By furnishing complete and objective evidence, the reporting physician makes it unnecessary for the reviewing physician to "write back" for additional clinical or laboratory data.

Where the medical evidence initially submitted indicates a reasonable likelihood that the applicant is disabled, but more precise clinical or laboratory findings are needed to arrive at a sound decision, or to resolve conflicts in the evidence, a consultative examination (usually at the specialist level) may be ordered to obtain additional information. Selection of consulting physicians and payment of fees are governed by State practices.

Some doctors feel that they should be reimbursed by the Government for the cost of preparing the medical reports on their patients, and it is, of course, quite within their prerogative to charge the patient a fee for that service. However, under the law, the Social Security Administration cannot pay that fee; that is the individual's responsibility.

Other doctors are perturbed when asked to complete medical reports for individuals whom they may not have seen for years. In these cases, however, the physician is not expected to describe the present condition of the patient, but his medical condition as of the time he made his last examination.

### Evaluation of Disability

The central purpose of disability evaluation is to determine remaining mental and physical capacities. To determine: (1) what the claimant has left, and (2) what he can do with what he has left.

A realistic evaluation of disability must be based on clinical and laboratory tests of the individual's ability to meet the metabolic demands of activity, to reason, to perceive, and to perform certain basic activities such as sitting, standing, bending and walking. When incapacity results from severe impairment of one or more such functions, it is essential to establish not only the fact that functional impairment exists, but also its extent.

A brief discussion of disability from heart disease may serve to illustrate the kind of evidence needed to measure the patient's remaining functional capacity, after appropriate therapy. Most frequently, impairments of the circulatory system produce loss of bodily function by reduction of cardiac reserve, or interference with peripheral vascular circulation. As a result the circulatory apparatus cannot meet effectively the metabolic demands placed upon it. The diagnosis of the condition usually reflects whether the impairment is caused by valvular disease, myocardial damage or vascular pathology.

Cardiac size by x-ray or physical and EKG findings furnish objective proof of cardiac pathology. The amount of dyspnea or angina described in terms of the number of steps that can be mounted or distance in feet or blocks that the patient can walk is highly significant to evaluation of the degree of loss of function. The presence or absence of cardiac edema and response to therapy are also indicative of severity of cardiovascular impairments. The status of the pulse in the peripheral vessels may provide gross clinical evidence of impaired circulation of the extremities.

Impairments of the cardiovascular system

may manifest themselves with dramatic suddenness, e.g., myocardial infarction, obstruction of vessels in peripheral or central nervous system circulation, lungs, and other visceral organs. The initial clinical manifestations are severe and the prognosis dubious. With survival from the acute stage, and appropriate therapy, substantial improvement can be expected over a period of time. A realistic evaluation of remaining function should be made after the convalescent period. Hence, the clinical and laboratory findings after maximum improvement from treatment are particularly valuable in making a determination of remaining cardiac, brain or other function. (Note that a "waiting period" is prescribed by law, i.e., the first monthly disability insurance benefit cannot be paid until the seventh month after the onset of the disability.) A description of the acute attack helps confirm the diagnosis and should therefore be included in the report.

Loss of function is evaluated on the basis of clinical and laboratory findings after maximum benefit from treatment. Clinical information concerning nature and response to treatment furnishes information on stability of functional capacity, i.e., a history of periodic decompensated heart disease, in spite of treatment, would indicate a comparatively severe condition.

More complicated tests of vascular function may be required in certain cases, e.g., arteriography. The reporting physician should not be concerned because he may not have equipment to perform these tests. A carefully performed exercise tolerance test (if not medically contraindicated) will almost always provide the clinical evidence needed to evaluate the degree of remaining function.

### Conclusion

In developing evaluation guides for the use of State agency and its own technical and professional personnel, the Social Security Administration has had the continuing cooperation of a Medical Advisory Committee appointed by Commissioner Schottland, in February 1955. The Committee is composed of recognized specialists associated with medical and allied professions in various fields outside Government, such as general practice, research, medical education, industry and labor.

The American Medical Association has cooperated with the Social Security Administration by informing its members about the medical aspects of the disability program, especially the preparation of medical reports. On June 1, 1957, the *Journal* of the American Medical Association carried a comprehensive report on the administration and organization of the disability provisions. Regulations on the meaning of disability appeared in the September 28, 1957, issue.

## Postgraduate Courses Announced By O.U. Medical Center

Two outstanding events for the months of September and October have been announced by the office of Postgraduate Education of the University of Oklahoma Medical Center. The Orthopedic Surgery and Fracture Postgraduate Program will be held September 29 and the Oregon-Oklahoma Combined Specialty Meeting for Practicing Physicians will be held October 3-4. Both meetings will be held in the auditorium of the University of Oklahoma School of Medicine.

### Orthopedic Surgery and Fracture Postgraduate Course

Subjects for the Orthopedic Surgery and Fracture course will include "Critical Analysis of the Disability In Fractures of the Os Calcis," "Ligament Injuries of the Knee," "The Common Pitfalls Encountered in the Treatment of Fractures and Their Avoidance," "The Use of Materials in Promotion of Fracture Healing," "Traumatic Arthrofibrosis; Reactions of Joints to Acute Trauma," "Pathologic Fractures in Children," "Prevention of Complications in Colles' Fracture," and "Metabolism of Fracture Healing."

Those participating in the program will be Harold J. Meier, M.D., Coldwater, Michigan; Don H. O'Donoghue, M.D., Oklahoma City; David C. Brown, M.D., Oklahoma City; Milton C. Cobey, M.D., Washington, D.C.; J. Vernon Luck, M.D., Ogden, Utah; Jack

Wickstrom, M.D., New Orleans, Louisiana; and Richard W. Payne, M.D., Oklahoma City.

A discussion period will end the program at 5:00 p.m. and a social hour and reception will follow in the Skirvin Hotel.

Following the all day Monday Session, which has been approved for seven hours credit by the Academy of General Practice, the American Fracture Association who helped develop the course, will continue meeting through October 2nd at the Skirvin Hotel.

Tuition fee for the course is $10.00.

### Oregon-Oklahoma Combined Specialty Meeting for Practicing Physicians

An interesting two-day session has been planned for the Oregon-Oklahoma specialty meeting. The first day program includes discussion of the following subjects: "Dysmenorrhea: Etiology, Diagnosis and Management," "A.C.T.H., Cortisone and Infection," "The Newer Corticosteroids," "Surgical Stress and the Adrenal Gland," "Pregnancy Following Moschowitz Procedure," "The Infertile Couple," and "The Thyroid in Pregnancy."

Participants in the program will include: Robert D. Anspaugh, M.D., Henry G. Bennett, Jr., M.D., Charles M. Bielstein, M.D., Robert M. Bird, M.D., William L. Bond, M.D., Joseph W. Funnell, M.D., Jess D. Herrmann, M.D., Robert B. Howard, M.D., Philip C. Johnson, M.D., Joseph W. Kelso, M.D., J. Neil Lysaught, M.D., Don H. O'Donoghue, M.D., John M. Parrish, Jr., M.D., Harris D. Riley, Jr., M.D., John A. Schilling, M.D., Carl Smith, M.D., S. N. Stone, M.D., Lal D. Threlkeld, M.D., Lucius Waites, M.D., and Kelly M. West, M.D., all of Oklahoma City.

On Saturday morning, preceding the Oregon-Oklahoma football game at Norman, five pre-game conferences will be held with subjects for discussion to be: "Pathogenesis and Therapy of Anemia," "Deceleration Injuries Including Athletic Injuries," "Obstetrical Problems," "Troublesome Gynecological Problems" and "Management of Convulsive Disorders."

Registration fee for the meeting will be $15.00. Tickets to the football game, which are $4.00 each, plus 25c for mailing charges, may be ordered from the Athletic Ticket Office, Norman, Oklahoma.

Further information for both of the postgraduate courses may be obtained by writing to the Office of Postgraduate Education, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

## AMA Plans Group Practice Roster

The AMA's Council on Medical Service has been in the process of compiling information on group practices throughout the country and eventually plans to publish a directory of these groups. To date the Council has information on 989 such groups located in the United States, Hawaii and Canada. Verification sheets have been sent out to those groups already on file. Physicians who practice in groups of two or more—who have not received a check sheet—are invited to send the following information to the Council: group practice name, address, office building (indicate whether rented or owned), number of physicians, and the specialities represented.

## Medical Student Awarded Research Scholarship

Mr. Charles A. Clough of 1315 Garfield Street, Norman, Oklahoma, now in his third year at the University of Oklahoma School of Medicine, Oklahoma City, has been awarded a $500 scholarship for research and clinical training this summer in the field of the allergic diseases.

Mr. Clough will work on studies on the Mechanism of action of Adrenal Steroids in protection against histamine, under the direction of Doctor Alan J. Stanley, Professor of Physiology at the University of Oklahoma.

Mr. Clough was born in Oklahoma City and is married. He received his B.S. degree at the University of Oklahoma in 1955, and is a member of the Phi Sigma and Lambda Tau societies. He has previously worked as

a Research Assistant at the University of Oklahoma during the summer of 1955.

The Allergy Foundation of America awarded the $500 summer or quarterly scholarships to twenty-two medical students from medical schools throughout the United States and Canada to encourage young students to broaden their knowledge in the field of the allergic diseases by research and clinical training.

Purpose of these awards is to expose the student to experience in the basic sciences related to allergy and to broaden the application of this knowledge through clinical experience. These summer scholars will work under the direction of scientists both in research and in the clinics.

These awards were made possible by grants to the Allergy Foundation of America by the Gustavus and Louise Pfeiffer Research Foundation, Mr. John D. Rockefeller, Jr., Mr. Peter Kuhn and the Barker Welfare Foundation.

## Medical Assistants Announce Program for Chicago Meeting

Final plans have been made for the Second Annual Convention of the American Association of Medical Assistants which will be held at the Palmer House, Chicago, on October 31, November 1 and 2, 1958.

The Association, which now has six thousand members in seventeen states, outlines its purposes as follows: "To inspire its members to render honest, loyal and more efficient service to the profession and to the public which they serve. To strive at all times to cooperate with the medical profession in improving public relations. To render educational services for the self-improvement of its members and to stimulate a feeling of fellowship and cooperation of the societies. To encourage and assist all unorganized medical assistants in forming local and state societies. This association is declared to be non-profit. It is not nor shall it ever become a trade union or collective bargaining agency."

### Oklahoman to Head Group

At the Chicago meeting, Lucille Swearingen, Bartlesville, will be installed as president of the national organization at ceremonies to be held in the Grand Ballroom of the Palmer House on November 1. Mrs. Swearingen is an assistant of Vernon M. Lockard, M.D., Bartlesville radiologist.

A large turnout is expected for the meeting with a sizeable number of Oklahoma assistants planning to attend. The educational aspects of the year's program, which is printed below, should adequately illustrate the value of this event to physicians whose assistants want to attend.

**PROGRAM**

**Friday, October 31**

8:00-10:00 a.m.—Registration
8:00 - 9:00 a.m.—House of Delegates Meeting
9:00-11:00 a.m.—General Business Session
(Welcome by Doctor F. . L. Blasingame, Executive Vice President of the American Medical Association)
11:00-12:00 noon—Advisors Symposium
Leo J. Starry, M.D., Moderator
"The Value of This Association to Doctors"—Fred Sternagel, M.D.
"Office Assistants and Blue Shield"—Robert L. Schaeffer, M.D.
"Professional Ethics"—Frederick H. Halls, M.D.
"Jobs Delegated to Medical Assistants"—Murray C. Eddy, M.D.
2:00 p.m.—Board Buses for AMA Building
2:30-5:00 p.m.—Tour of AMA Building and program in their auditorium
(Speakers, films and exhibits to be furnished by AMA)
6:00-7:00 p.m.—Social Hour
7:00 p.m.—Dinner
Lucille Swearingen, Presiding.
Speaker—Morris B. Fishbein, M.D.

**Saturday, November 1**

8:00 a.m.—House of Delegates Meeting—Election
The special sections listed under "Business," "Technical" and "Medical." Three rooms will be running at the same time with a medical assistant manning each one. Girls may choose which subjects they are especially interested in and go to these rooms. Rooms will be fully equipped with the latest office machines, laboratory equipment and office furniture.
ROOM I—BUSINESS
9:00-9:30—Insurance (Daniel C. McKay, The Paulsen Insurance Co.)
9:45-10:15 a.m.—Office Machines (Colorado M.A. presiding)
10:30-11:00 a.m.—Credit (Maynard L. Keecox, Medical-Dental Hospital Bureaus of America)
11:15-11:45 a.m.—Records-Forms (Colwell Publishing Co., etc.)

3:30-4:00 p.m.—Telephone Techniques (Illinois Telephone Co.)
4:15-4:45 p.m.—Banking (Raymond S. Blunt, Sr., C.P.A.)

ROOM II—MEDICAL

9:00-9:30 a.m.—Emergencies (Missouri M.A.)
9:45-10:15 a.m.—Medicolegal Problems (George Hall, AMA)
10:30-11:00 a.m.—Case Histories—Pertinent Information (Michigan M.A.)
11:15-11:45 a.m—Good Housekeeping and Personal Grooming (Texas M.A.—2)
3:30-4:00 p.m.—Civil Defense and How We Can Help (Harold Lueth, M.D. FCDA, Medical Consultant, Health Division, Operations Service)
4:15-4:45 p.m.—Public Relations (Jerry Harris, Medical Arts Division of Creditors Bureau, El Paso, Texas)

ROOM III—TECHNICAL

9:00-9:30 a.m.—New Laboratory Procedures (Mr. A. Coldiron and Iowa M.A.)
9:45-10:15 a.m.—New Developments in X-ray (Robert G. Morris, Jr., M.D.)
10:30-11:00 a.m.—Inner Office Professional Ethics (California M.A.)
11:15-11:45 a.m. — ECG, Ultrasonic and Diathermy (Herbert Levinger, A. S. Aloe Co.)
3:30-4:00 p.m.—Aseptic Techniques (Wisconsin M.A.)
4:15-4:45 p.m.—What Is Good Practice for the Physician and Medical Assistant? (Ralegih Oldfield, M.D., President, Illinois Medical Society)

GENERAL SESSION

2:00-3:20 p.m.—"Go and Do Likewise"—Harold Scherer, Business Manager, Monroe Clinic, Monroe, Wisconsin

"Is the Welcome Mat Out"—I. D. Harvey, Divisional Sales Manager, Abbott Laboratories, North Chicago, Illinois

6:00-7:00 p.m.—Social Hour and Reception
7:00 p.m.—BANQUET AND INSTALLATION OF OFFICERS

Presding: Mary Kinn, President, American Association of Medical Assistants

Master of Ceremonies: Robert J. Samp, M.D., Director of Tumor Clinic, University Hospitals, Madison, Wisconsin

**Sunday, November 2**

10:00-12:00 noon—Sunday morning Brunch

Farewell from Chicago and an invitation to Philadelphia in 1959

* * * * *

Hotel reservations should be made directly with: Palmer House, Chicago, Illinois:

Rates: Singles—$ 8.00-$16.00
Doubles—$14.50-$20.00 No deposit necessary
Twins—$15.50-$22.00

Registration fee of $18.00 includes:

Friday: Tour of the American Medical Association building, program in their auditorium, and transportation from and return to hotel.

Friday: Dinner in the Red Lacquer Room.

Saturday: Cocktail party and banquet—Grand Ballroom.

Sunday morning: Brunch.

# THE CITATION

## MEDICO-LEGAL BRIEFS

**Prepared by the Law Department of the American Medical Association**

TAX REGULATION—The Commissioner of Internal Revenue has liberalized the rules on the deductibility of expenses for education applicable to physicians. The new rules provide in part, that "expenditures made by a taxpayer for his education are deductible if they are for education (including research activities) undertaken primarily for the purpose of: (1) Maintaining or improving skills required by the taxpayer in his employment or other trade or business. . . ."

Regs. 1.162-5. Expenses for education.

TAX RULING—A new Internal Revenue ruling provides that the amount of the checks received by a physician from patients he has treated in a hospital in which he is employed full time, which checks he is required to endorse over to the hospital, is not includable in his gross income.

Rev. Rul. 58-200

INSURANCE DISCOVERY — The Supreme Court of Illinois has held that one must answer discovery interrogatories respecting the existence and amount of liability insurance. In its opinion, the Court reviewed decisions in other jurisdicitions and found that California, Kentucky, and the Federal District Courts of New York and Tennessee have permitted insurance discovery, while New Jersey, Nevada, Minnesota, and the Federal District Court of Pennsylvania have not.

*People* v. *Fisher*, 145 N.E. 2d 588 (Ill., Nov. 19, 1957)

*Further information on the preceding cases may be obtained from the Law Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.*

# Coming Meetings

**UNIVERSITY OF OKLAHOMA MEDICAL CENTER**

**POSTGRADUATE PROGRAM***

**Oklahoma City, Oklahoma**

**Individual Postgraduate Courses**

ORTHOPEDIC SURGERY AND FRACTURE POSTGRADUATE COURSE—Sept. 29
Developed by the American Fracture Association and precedes the meeting of the American Fracture Association, September 30 through October 2.

OREGON-OKLAHOMA COMBINED SPECIALTY MEETING FOR PRACTICING PHYSICIANS—October 3 and 4
Combined Scientific Session Friday, Oct. 3. Saturday morning choice of pre-game (Oregon-Oklahoma) Round-table Breakfast Conferences in Surgery, Medicine, Pediatrics, Obstetrics, Gynecology.

ARTHRITIS AND RELATED DISORDERS—Nov. 12, 13, 14, and 15
Second Oklahoma Colloquy on Advances in Medicine. The program will be devoted to Arthritis and related disorders. Twelve nationally prominent investigators in their field will participate and present the results of original work from their laboratories.

ADVANCE ELECTROCARDIOGRAPHY — March 2 through 6
(Prerequisite, Dr. Bayley's Basic Electrocardiography course.)

OBSTETRICAL-GYNECOLOGICAL SYMPOSIUM—March 7
Sponsored by the Oklahoma City Obstetrical and Gynecological Society. There will be two prominent guest lecturers.

OPHTHALMOLOGY-OTOLARYNGOLOGY SYMPOSIUM—March 12 and 13
Sponsored by Oklahoma City Society of Ophthalmology and Otolaryngology.
Guest Lecturers:
Michael J. Hogan, M.D., Ophthalmologist, San Francisco.
Prominent Otolaryngologist to be announced.

ORTHOPEDIC SYMPOSIUM—April 10 and 11
Treatment of Athletic Injuries.
Sponsored by the Regional Committee on Trauma of the American College of Surgeons.

FIFTH ANNUAL COMBINED SURGERY, RADIOLOGY, PATHOLOGY SYMPOSIUM—May 14 and 15
Diagnosis and Treatment of Thyroid Diseases.
Sponsored by the Oklahoma Association of Pathologists, Oklahoma Association of Radiologists and Oklahoma Chapter of American College of Surgeons. Guest participants of national reputation in surgery, radiology and pathology will participate.

OKLAHOMA ASSOCIATION OF HOUSE STAFF PHYSICIANS—May 22
Two guest lecturers and presentation of original papers by members of the various house staffs will highlight this program. Participating hospitals are: Hillcrest Medical Center, Tulsa, St. John's, Tulsa; McBride, Mercy, St. Anthony, University, Veterans Administration, Wesley, Oklahoma City; Central State Hospital, Norman.

**SERIAL POSTGRADUATE COURSE**

**Postgraduate Division**

**UNIVERSITY OF OKLAHOMA MEDICAL CENTER**

**Oklahoma City, Oklahoma**

**1958-1959**

Sept. 10—Medicine—Advances in Diabetes Mellitus.

Oct. 8—Pediatrics—Pediatric Diagnosis Problems.

Nov. 19—Surgery—Ano-Rectal Lesions and Their Management.

Dec. 10—Medicine—The Selection of Patients for Cardiovascular Surgery.

Jan. 14—Pediatrics—Diagnosis and Management of Heart Disease in Infancy and Childhood.

Feb. 11—Urology Symposium and C. B. Taylor Lectureship. (Guest Lecturer to be Announced.)

Mar. 11—Medicine—Advances in the Diagnosis and Management of Common Allergic Disorders.

April 8—Anesthesiology—Anesthesia for the Part-Time Anesthetist.

May 13 — Pediatrics — Antimicrobial Therapy and Treatment of Infectious Disease in Childhood.

June 10—Surgery—Herniae.

Designed so physicians may attend four hours of formal instruction in the above fields while spending only one-half day from their office, this series is approved for credit by the Oklahoma Academy of General Practice. Time will be 3:30 to 8:30 p.m. on the Second Wednesday of each month, September through June. Registration is $3.00 per session or $25.00 for the entire series.

*Further information may be obtained from the Office of Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th Street, Oklahoma City, Oklahoma.

## OKLAHOMA CITY CLINICAL SOCIETY

**October 27, 28, 29, 1958**

**Biltmore Hotel Oklahoma City**

The Twenty-Eighth Annual Conference of the Oklahoma City Clinical Society will be held October 27, 28 and 29 in the Biltmore Hotel, Oklahoma City. Registration fee of $20.00 will include all features. Further information may be obtained by writing to: Executive Secretary, 503 Medical Arts Building, Oklahoma City, Oklahoma.

## SECOND OKLAHOMA COLLOQUY ON ADVANCES IN MEDICINE

**November 12, 13, 14 and 15, 1958**

The Second Oklahoma Colloquy on Advances in Medicine will be held on November 12, 13, 14 and 15. Eleven nationally prominent investigators in their field will participate and present the results of original work from their laboratories.

Registration will be open to all physicians. Further information may be obtained by writing to the Division of Postgraduate Education, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

## AMERICAN FRACTURE ASSOCIATION

**September 30, October 1, 2, 1958**

**Hotel Skirvin** **Oklahoma City, Oklahoma**

The American Fracture Association will hold its 19th Annual Meeting in Oklahoma City, September 30, October 1-2, 1958 at the Hotel Skirvin.

The meeting will be preceded and coordinated with the University of Oklahoma School of Medicine, Postgaduate Division, which will meet Monday, September 29 at the Medical School Auditorium. The postgraduate course at the Medical Center is acceptable for category #1 by the American Academy of General Practice. The Association meeting is acceptable for category #2.

Further information and a detailed program may be obtained by writing to the American Fracture Association, 610 Griesheim Building, Bloomington, Illinois.

## COLORADO STATE MEDICAL SOCIETY ANNUAL MEETING

**September 24-27, 1958** **Colorado Springs**

The Colorado State Medical Society's Annual Session will be held at the Broadmoor Hotel, Colorado Springs, September 24-27, 1958. Further information may be obtained by writing to Harvey T. Sethman, Executive Secretary, Colorado State Medical Society, 835 Republic Building, Denver, Colorado.

## AMERICAN CANCER SOCIETY ANNUAL SCIENTIFIC SESSION SYMPOSIUM ON CANCER OF THE COLON AND RECTUM

**October 20-21, 1958** **Biltmore Hotel New York City**

A complete program of the Symposium on Cancer of the Colon and Rectum to be presented at the Annual Scientific Session of the American Cancer Society may be obtained by writing to Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, New York.

## THE UNIVERSITY OF TEXAS CLINICAL CONFERENCE ON CANCER CHEMOTHERAPY

**November 14-15, 1958** **Houston, Texas**

The University of Texas M.D. Anderson Hospital and Tumor Institute and The University of Texas Postgraduate School of Medicine will present the third annual clinical conference on November 14 and 15, 1958 at the Texas Medical Center in Houston.

Eight hours credit will be certified by the American Academy of General Practice for attendance at this conference. An advance $5.00 registrar's fee must accompany the registration for the Academy. Further information and a detailed program may be obtained from the University of Texas Postgraduate School of Medcine, Jesse Jones Library Building, Houston, Texas.

## AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS DISTRICT VII

**September 12-13, 1958**

**Jackson, Mississippi**

District VII, American College of Obstetrics and Gynecologists, will meet in Jackson, Mississippi September 12 and 13. The program consisting of scientific papers, round tables and movies will be held in the King Edward Hotel. Further information may be obtained by writing to C. G. Sutherland, M.D., The Woman's Clinic, 918 North State Street, Jackson, 2, Mississippi.

## SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS

**October 29-30, 1958** **Chicago, Illinois**

The Society for Clinical and Experimental Hypnosis, an International Scientific Society, comprised of physicians, dentists and psychologists engaged in the clinical use of hypnosis, will present a scientific program in Chicago at the Morrison Hotel, October 29-31, 1958.

The program will include Breakfast Seminars, Round-table Luncheons, Panel Discussions and Formal Presentations. The Medical Program will include such topics as: Hypnotherapeutic Control of Habit Patterns: During Addiction, Smoking, Overweight; Hypnosis in Physical Therapy and Rehabilitation; Hypnosis in Asthma and Allergic Manifestations; Use and Abuse of Hypnosis in General Practice; Hypnosis in Pediatrics and Geriatrics; Hypnosis in Minor and Major Surgery; Hypnosis in Internal Medicine; Hypnoanesthesia in Obstetrics; Physiology of Hypnosis; and Hypnosis in Psychiatry.

Immediately preceding the Annual Meeting of the Society for Clinical and Experimental Hypnosis, the Institute for Research in Hypnosis of the Long Island University Postgraduate School will present its Annual Workshop in Clinical Hypnosis, October 27-29, at the Morrison Hotel.

Registration for Breakfast Seminars, Round-table Luncheons and General Sessions will be limited. For a copy of the program and more detailed information, write to the Administrative Secretary, Society for Clinical and Experimental Hypnosis, 750 North Michigan Avenue, Chicago 11, Illinois.

## ACADEMY OF PSYCHOSOMATIC MEDICINE

**October 9-11** **New York, New York**

The fifth annual meeting of the Academy of Psychosomatic Medicine will be held October 9-11, 1958, at the Park Sheraton Hotel in New York City. The program will be devoted to the Psychosomatic Aspects of Internal Medicine and will include formal papers, panel discussions and luncheon conferences.

Information may be obtained from Bertram B. Moss, M.D., Suite 1035, 55 East Washington Street, Chicago 2, Illinois.

# *Have You Heard?*

H. H. MACUMBER, M.D., of the Chickasha Hospital and Clinic has moved to Ventura, California where he will be associated with the Ventura Medical Group.

ROBERT MITCHELL, M.D., and ED POINTER, M.D., both of Henryetta, are moving to Sallisaw in September. They will occupy newly remodeled offices in the Latimer building on Choctaw Street. Both Doctor Mitchell and Doctor Pointer graduated from the University of Oklahoma School of Medicine.

DOCTOR AND MRS. L. GORDON LIVINGSTON, Cordell, are now touring Europe and recently attended the World Medical Association meeting in Copenhagen.

WILLIAM BEST THOMPSON, M.D., of Oklahoma City, has been elected president of the Oklahoma State Heart Association. Included on the executive committee are H. W. WENDELKEN, M.D., Miami; TERRELL COVINGTON, JR., M.D., Tulsa; and JEROME D. SHAFFER, M.D., of Oklahoma City.

As a token of appreciation for his years of service to Seminole, J. T. PRICE, M.D., retired Seminole physician, was recently presented a TV set by a group of friends, clubs and business firms of Seminole.

F. DAVID KALBFLEISCH, M.D., began his practice in Lawton in July. Doctor Kalbfleisch, a native Lawtonian, graduated from University of Oklahoma School of Medicine in 1956. He interned at Parkland Memorial Hospital in Dallas and at the Veterans Hospitals in Dallas and McKinney, Texas. The new offices of Doctor Kalbfleisch are located in the Lawton Clinic, 605 Gore Street.

L. L. LOWRY, M.D., from Anadarko and BAILEY L. DIETRICH, M.D., Boise City, have joined the staff of the Buford-Oxley Clinic in Guymon.

# Organization News

## AMA Begins Reorganization

A first step in the American Medical Association's broad re-organization plans was reviewed and approved by the Board of Trustees, meeting in Chicago during the week-end of August 2-3.

The purpose was to streamline AMA's administrative set-up. No changes were made that require changes in the constitution and by-laws. Nor were the relationships between the standing committees and the Board of Trustees or House of Delegates disturbed. Program content also remains the same for the time being.

Six new divisions were established: Business, Law, Communications (professional and public relations), Field Service, Scientific Publications (editorial), and Council Administration. The last division is temporary, pending furthehr study of the scientific and socio-economic activities of the Association. The directors of the divisions are, respectively, Russell H. Clark, C. Joseph Stetler, Leo E. Brown, Aubrey Gates, Doctor Austin Smith, and Doctor Ernest B. Howard, assistant executive vice president, who will administer the temporary divisions.

Important administrative realignments include: (1) the transfer of AMA News and Today's Health editorial functions to the Communications Division, and (2) centralization of all advertising, circulation and printing activities in the Business Division.

New positions established and filled are the office of assistant to the executive vice president (Tom Hendricks) and director, Field Service Division (Aubrey Gates).

The over-all legislative program, including the Washington Office, Committee on Legislation, and related field activities, will be reviewed by a special committee of trustees and delegates appointed at the August 2 meeting of the Board. The existing organizational pattern for legislative activities will be continued until this special committee reports its recommendations to the Board.

## OSMA 1958 Committees Completed

E. C. Mohler, M.D., recently announced the following committees for the 1958-59 year, which are in addition to those carried in the July issue of *The Journal:*

**Medico Legal Relations**

Marshall O. Hart, M.D., Tulsa, Chairman
William T. Gill, M.D., Ada
S. N. Stone, M.D., Oklahoma City
Earl McBride, M.D., Oklahoma City
Thomas H. Mitchell, M.D., Tulsa

**Blue Cross-Blue Shield Liaison**

Henry T. Russell, M.D., Enid, Chairman
R. B. Howard, M.D., Oklahoma City
Tullos O. Coston, M.D., Oklahoma City
Frank Nelson, M.D., Tulsa
Vernon M. Lockard, M.D., Bartlesville
C. S. Graybill, M.D., Lawton
Carl Lindstrom, M.D., Tulsa
Robert F. Loughmiller, M.D., Oklahoma City
E. M. Henry, M.D., McAlester
Kenneth L. Wright, M.D., Ardmore
Charles E. Wilbanks, M.D., Tulsa
R. G. Obermiller, M.D., Woodward
Donald Olson, M.D., Vinita

## Donahue, Turner To Attend Conference On Aging

Hayden Donahue, M.D., Chairman of the OSMA's Committee on Health Care of the Aged, and Henry H. Turner, M.D., Committee member, will attend the American Medical Association's Conference on Aging, September 13-14, Chicago.

The purpose of the meeting is to coordinate medicine's activities in the field of aging. The program will include: presentation of the major challenges to the medical profession in the area of aging; opportunity for each participant to discuss these challenges as they relate to the activities of the medical societies they represent; round table discussions on the activities of other national organizations in the field, and scientific papers.

## OSMA To Entertain O.U. Medical Students

The annual dinner for members of the University of Oklahoma Chapter of the Student American Medical Association has been scheduled for October 17 at the Petroleum Club, Oklahoma City, beginning at 7:30 p.m. Sponsored each year by the Oklahoma State Medical Association, the event affords an opportunity for members of the OSMA and the student AMA to lay the foundation for future relationships as professional and organizational colleagues.

A number of special guests have been invited to attend the buffet dinner, including Earnest B. Howard, M.D., Assistant Executive Vice-President of the American Medical Association, Russell F. Standacher, Executive Secretary of the Student American Medical Association, his assistant, Robert Reed and George L. Cross, Ph.D., President of the University of Oklahoma.

In addition, preceptors and preceptees, council members and officers of the OSMA will be sent invitations. Final arrangements for the evening's program are being made by Hershel L. Douglas, President of the Student AMA and E. C. Mohler, M.D., OSMA President.

## McAlester Symposium Well Attended

Over one hundred physicians attended the Southeastern Oklahoma Clinical Symposium which was held on August 9-10 at the McAlester Clinic. Jointly sponsored by the Clinic and the Department of Postgraduate Education, University of Oklahoma School of Medicine, the symposium program was comprised of two out-of-state authorities as well as a member of Oklahoma specialists.

Special out-of-state guests were Phillip W. Brown, M.D., Mayo Clinic, and K. M. Earle, M.D., University of Texas Medical Branch, Galveston.

State speakers were: Dixon N. Burns, M.D., Tulsa; Robert A. Fouty, M.D., Talihina; Tom S. Gafford, M.D., Muskogee; Jess E. Miller, M.D., Oklahoma City; William R. Murphy, Jr., M.D., McAlester; Harris D. Riley, Jr., M.D., Oklahoma City; and Joseph M. White, M.D., Oklahoma City.

In addition, Robert J. Bell, McAlester attorney, directed a Sunday afternoon discussion of medical-legal problems. His talk followed a film on the same subject.

Recreation for the weekend affair included a dinner dance, fishing and water skiing excursions as well as several events planned especially for wives.

## Medicare Cutback Imposed by DOD

After weeks of uncertainty, the Defense Department has announced how it will effect budgetary economies in the Medicare program. The new policies were outlined in Washington on August 8 before representatives of state medical societies, Blue Cross-Blue Shield, Mutual of Omaha, the American Medical Association and the American Hospital Association. Walter E. Brown, M.D., OSMA Medicare Chairman and Dick Graham, Executive Secretary, represented Oklahoma.

At the August 8 meeting a brief of the proposed cutback plan of the Department of Defense was outlined. The cutbacks dealt principally with maternity care, emergency care, injuries, termination visits, pre and post surgical tests, neo-natal visits, nervous and mental diseases, acute emotional disorders and elective surgery.

### Delegates May Be Called

The above changes as outlined at the Washington meeting have not as yet become official and there will not be an official change until approved by the Oklahoma State Medical Association.

According to E. C. Mohler, M.D., President of the OSMA, and Doctor Brown, a special meeting of Oklahoma's House of Delegates will probably be called, upon receipt of the official regulations, to review the restrictions and determine the Association's future relationship with the program.

# The Achievements of Aristo

...in Skin Diseases: In a study of 26 patients with severe dermatoses, ARISTOCORT was proved to have potent anti-inflammatory and antipruritic properties, even at a dosage only ⅔ that of prednisone[1]... Striking affinity for skin and tremendous potency in controlling skin disease, including 50 cases of psoriasis, of which over 60% were reported as *markedly improved*[2]...absence of serious side effects specifically noted.[1,2,3]

...in Rheumatoid Arthritis: Impressive therapeutic effect in most cases of a group of 89 patients[4]... 6 mg. of ARISTOCORT corresponded in effect to 10 mg. of prednisone daily (in addition, gastric ulcer which developed during prednisone therapy in 2 cases disappeared during ARISTOCORT therapy).[5]

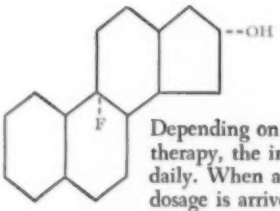

1. Rein, C. R., Fleischmajer, R., and Rosenthal, A. L.: J. A. M. A. *165*:1821, (Dec 7) 1957.
2. Shelley, W. B., and Pillsbury, D. M.: Personal Communication.
3. Sherwood, A., and Cooke, R. A.: Personal Communication.
4. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957.
5. Hartung, E. F.: Personal Communication.
6. Schwartz, E.: Personal Communication.
7. Sherwood, A., and Cooke, R. A.: J. Allergy 28:97, 1957.
8. Hellman, L., Zumoff, B., Kretshmer, N., and Kramer, B.: Paper presented at Nephrosis Conference, Bethesda, Md., Oct. 26, 1957.
9. Ibid.: Personal Communication.
10. Barach, A. L.: Personal Communication.
11. Segal, M. S.: Personal Communication.
12. Cooke, R. A.: Personal Communication.
13. Dubois, E. L.: Personal Communication.

# tocort®

Triamcinolone LEDERLE

**..in Respiratory Allergies:** "Good to excellent" results in 29 of 30 patients with chronic intractable bronchial asthma at an average daily dosage of only 7 mg.[6]... Average dosage of 6 mg. daily to control asthma and 2 to 6 mg. to control allergic rhinitis in a group of 42 patients, with an actual reduction of blood pressure in 12 of these.[7]

**...in Other Conditions:** Two failures, 4 partial remissions and 8 cases with complete disappearance of abnormal chemical findings lead to characterization of ARISTOCORT as possibly the most desirable steroid to date in treatment of the nephrotic syndrome.[8,9]... Prompt decrease in the cyanosis and dyspnea of pulmonary emphysema and fibrosis, with marked improvement in patients refractory to prednisone.[10,11,12]... Favorable response reported for 25 of 28 cases of disseminated lupus erythematosus.[13]




Depending on the acuteness and severity of the disease under therapy, the initial dosage of ARISTOCORT is usually from 8 to 20 mg. daily. When acute manifestations have subsided, maintenance dosage is arrived at gradually, usually by reducing the total daily dosage 2 mg. every 3 days until the smallest dosage has been reached which will suppress symptoms.

Comparative studies of patients changed to ARISTOCORT from prednisone indicate a dosage of ARISTOCORT lower by about ⅓ in rheumatoid arthritis, by ⅓ in allergic rhinitis and bronchial asthma, and by ⅓ to ½ in inflammatory and allergic skin diseases. With ARISTOCORT, no precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

ARISTOCORT is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

## Oklahoma County Forms Hearing Association

A unique hearing project was recently inaugurated in Oklahoma County with the establishment of the Oklahoma County Hearing Association. This endeavor is jointly sponsored by the Community Council and the Oklahoma Rehabilitation Service. Financial support is obtained from the federal office of Vocational Rehabilitation and the American Hearing Society, a national voluntary health agency.

In explaining the problems with which the Association will deal, Lee M. Jones, President, said, " . . . There must be an awareness in the minds of all the people that in each succeeding year of age, hearing loss becomes more prevalent and more difficult to overcome by any kind of rehabilitative measure. The first goal of the Association is to locate young adults in Oklahoma County and see that the agencies or individuals responsible for treatment, training and placement offer a coordinated program of services to them. The tragedy of deafness is not understood by those with good hearing. Medical treatment and compensatory measures are not demanded strongly enough by those who suffer from impaired hearing. Psychologically, this phase needs clarification. The mental process of the hearing handicapped requires a different approach from those in any other health field. Deafness does not kill or main its victims, but it does devastate them in a way that is more damaging to their personalities and social well being than most disabilities. Educationally, the young are seriously handicapped and vocationally, their abilities are apt to be underestimated. For those employable age, the opportunity for work or advancement on a job is often denied."

The Board of the Oklahoma County Hearing Association is comprised of representatives from the fields of medicine, audiology, education, law, labor, industry, recreation, religion and all the social agencies that come in contact with the deaf and the hard of hearing in Oklahoma County. Jack Hough, M.D., Oklahoma City, is the medical member of the Board.

Located at Room 308, YWCA, Oklahoma City, the Association is under the direction of Mrs. Margaret L. Washington, the Rehabilitation Coordinator for the American Hearing Society. Patients in Oklahoma County who are in need of social and vocational adjustment may be referred to the Association.

## Oklahoma Well Covered By Health Insurance

The number of people in Oklahoma covered by voluntary health insurance has reached a new high, the Health Insurance Council reported August 20. The Council estimates that over 1,435,000 persons in the state now are protected by some form of insurance designed to help pay hospital and doctor bills.

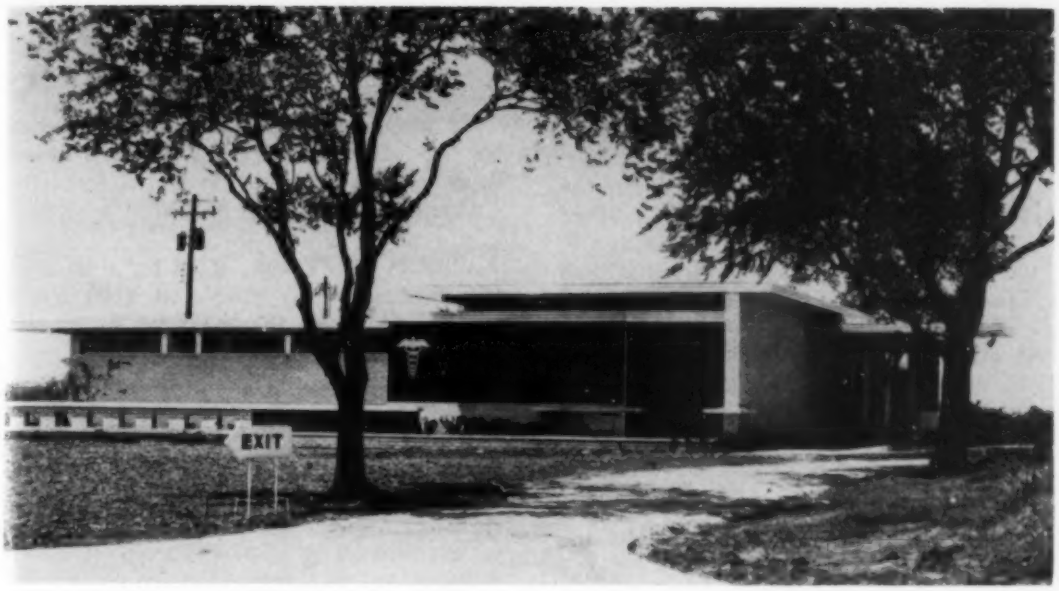
This figure, the Council said, is part of the continued growth of health insurance throughout the country, which was revealed in its 12th annual survey of the extent of voluntary health insurance coverage for 1957. The number of people covered by some form of health insurance in the nation, according to a Council estimate, is now 123,000,000, or 72% of the total U.S. civilian population.

The Council survey, based on reports of insurance programs of insurance companies, Blue Cross-Blue Shield and other health care plans, points out that the 1,435,000 persons covered by hospital expense insurance in Oklahoma as of December 31, 1957, surpasses the 1956 year-end total of 1,320,000.

The number of people with surgical expense insurance, which helps to defray the cost of physicians' charges for operations, climbed to 1,350,000 as compared to 1,199,000 in 1956.

Persons protected by regular medical expense insurance, providing for doctor visits for non-surgical care, rose to 811,000, compared to 738,000 the year before.

The Health Insurance Council, which is a federation of eight insurance associations representing over 90% of the accident and health insurance business handled by insurance companies, stated that this growth reflects the desire of the people of Oklahoma to help protect themselves against the cost of accident and illness.




## MAYFAIR MEDICAL CENTER MOVES TO NEW BUILDING

An open house was held June 15, 1958, in the newly completed Mayfair Medical Center, 2925 Northwest 50th Street, Oklahoma City.

Modern in design and completely fireproof, the air-conditioned building has some 6,500 square feet of floor space plus basement storage. Complete laboratory, x-ray, minor surgery, physical therapy and recovery facilities are provided. In addition, there are twelve medical treatment rooms and four dental suites.

Located in the building are Nolen L. Armstrong, M.D., Martin H. Andrews, M.D., Leonard R. Diehl, M.D., William N. Gibbens, D.D.S., and Robert K. Wynne, D.D.S.

Architect for the building was Ray Bowman with the firm of Cirlos, Nicek and Associates.

## Association Aids Farm Home Conference

Two guest speakers and two exhibits were furnished by the Oklahoma State Medical Association for the 41st Annual Farm Home Conference, August 4-7, at Stillwater. Aubrey Gates, Director of the newly-formed AMA Field Service Division and Dick Stalvey, representing the Communications Division of the AMA, were two of the outstanding personalities appearing on the program.

With a theme of "New Accents in Family Living," the conference attracted nearly two thousand home demonstration agents and other rural health workers.

Mr. Gates' topic was "You and Your Health Dollar." "Mechanical Quackery" was the subject covered by Mr. Stalvey, a former employee of the Food and Drug Administration and recently associated with the AMA's Bureau of Investigation. Both talks were well received by those in attendance.

The AMA exhibits, "Testing the Drinking Driver" and "Where Your Medical Dollar Goes" were also furnished by the OSMA for the health education exhibit section of the meeting.

# Book Review

**Diabetes As a Way of Life.** T. S. Danowski. Coward-McCann, Inc., 1957.

The present volume is designed to fill the gap between the earlier publication, DIABETES MELLITUS WITH EMPHASIS ON CHILDREN AND YOUNG ADULTS, and a similar manual used by the author for distribution to patients. The former proved to be too detailed not only for patients but also for paramedical professions such as nursing, dietetics and social service.

The book is divided into 16 chapters and numbers 177 pages. The first chapter, entitled "Diabetes as a Way of Life," after a resume of the reported incidence of the disease, gives a definition and explanation of many aspects of diabetes—when it begins, the emotional aspects, and the role of the doctor, the patient and his family. The following two chapters are concerned with manifestations of satisfactory and unsatisfactory control and the principles of dietary treatment and insulin substitution. The factors which make diabetes worse and such problems as acidosis and coma are discussed. However, relatively little emphasis is given the important problem of insulin shock and its irreparable cerebral damage.

Several chapters are concerned with the unique problems in the life of the diabetic. There is adequate treatment of the problems associated with infections and surgery in the diabetic, diabetes in children, pregnancy in diabetics, and other problems. The chapter on social aspects of diabetes is excellent. In this section many problems of the diabetic, which are rarely covered in texts but are of great importance, are discussed. The responsibility of the housewife, the hostess, "dating," practical aspect of travel for the diabetic, and other social aspects of the disease are covered. The chapter entitled "Living with Diabetes" discusses attitudes and expectations in the disease. The latter portion of the book, made up of sections on questions and answers, which constitutes a check-list for the diabetic, and a glossary of terms for diabetics, should find real use.

The contents are based on the author's experience and very little, because of the objective of the book, is given to opposing opinions concerning the disease. Several minor errors in printing are noted.

In the reviewer's opinion this work is too detailed for the average diabetic patient or his family. It can be recommended for certain selected patients and is an excellent reference source for physicians in interpreting to patients and their families the problems associated with diabetes mellitus.—*Harris D. Riley, Jr., M.D.*

# Have You Heard?

BRYCE OWEN BLISS, M.D., Shawnee, opened his new office at 111 West Shawnee Street in July. Doctor Bliss graduated from the University of Oklahoma in 1957.

WARREN L. FELTON, II, M.D., announced the opening of his offices at 1200 North Walker, Oklahoma City. Doctor Felton is a Diplomate of the American Board of Surgery and of the Board of Thoracic Surgery.

GLEN FLOYD, M.D., will move into new offices in the Price Tower, Bartlesville, in September. Doctor Floyd's practice is limited to Ophthalmology.

PHILLIP G. WALTERS, M.D., has joined the staff at the Loy Clinic in Pawhuska. Doctor Walters is a graduate of the University of Oklahoma School of Medicine and did his preceptorship at the Loy Clinic.

LAWRENCE E. SILVEY, M.D., is a new associate of L. N. GILBERT, M.D., and KENNETH OGG, M.D., in the Gilbert Clinic in Bethany. Doctor Silvey took his medical training at the University of Kansas School of Medicine.

JOHN A. ORBIN, M.D., from Tulsa, and IRVIN C. MCLENDON, M.D., a native Georgian, recently joined the Britton Road Clinic in Oklahoma City. Doctor Orbin is a graduate of the University of Oklahoma School of Medicine and Doctor McLendon graduated from the Medical College of Georgia.

# 25 YEARS AGO

Articles published in *The Journal* of the Oklahoma State Medical Association September, 1933.

### THE CRIPPLED HAND

**Curt Von Wedel, M.D., Oklahoma City**

"Deformities of the hand constitute one of the very serious catastrophies that befall mankind. Next to permanent brain injury and blindness, serious loss of the use of the hands does more to incapacitate one in our social lives, than probably any other single factor. We are going to briefly sketch in this talk, some of the more common conditions, which can be easily remedied. . . .

If you do not know your anatomy, get down your book, put it on the table next to you, open at the page showing the tendons and nerves of the hand, and refer to it as you sew up the hand. I have found in most instances that the difficult thing for the men to differentiate is the nerve from the tendon. There are only two nerves of any consequence: the ulnar and the median. The median nerve is directly under the tendon which sticks out when one fully extends the fingers, and is known as Palmaris Longus. This nerve is usually cut and inasmuch as it is the nerve of sensation for most of the hand, it is very important. The upper end will not contract, but the lower end springs into the palm. The common instinct is to sew the median nerve into the palmar fascia, mistaking it for the tendon. If you are not sure, make a longitudinal incision into the nerve. You will find it pinkish and vascular. The tendon is white, hard, and has little blood supply. The ulnar nerve lies deep next to the flexor carpi ulnaris. This is much more easily found as it does not usually retract into the palm. With a book before you (if you do not understand the relationship), the nerves can be carefully approximated, end to end, with fine number A Corticelli black silk and an ordinary straight needle. These needles can likewise be used for accurate end to end approximation of tendons. One does not need a lot of heavy stuff, because we flex the wrist when we put up the hand so there is no tension whatsoever. The main thing is to take your time; it takes hours. . . . "

### Editorial Notes—Personal and General

" . . . DR. W. S. IVY, Duncan, who was injured in an automobile accident near McLean, Texas, is reported improving. . . .

"WOODS-ALFALFA COUNTY MEDICAL SOCIETIES held their July meeting at Winchester Lake on the Salt Fork, July 25th. Fishing was the order of the afternoon, with a picnic dinner at 6:00 P.M., after which papers by Drs. Frank H. McGregor, Mangum; and T. D. Benjegerdes, Beaver, on 'Goiter' were heard."

"OKLAHOMA COUNTY COMMISSIONERS AND CITY MANAGER made a sensible and long step forward when they merged the county and city medical services into a coordinated system. The city will continue its dispensary, dispensary physicians being empowered to send needy cases to the County Hospital. A night physician will be maintained throughout the year. Dr. Basil Hayes was appointed County Physician and Dr. George Borecky was appointed field physician. . . . "

# Deaths

### N. K. WILLIAMS, M.D.
### 1891-1958

N. K. WILLIAMS, M.D., 67-year-old McCurtain physician, died at his office on July 14, 1958. Doctor Williams had practiced in McCurtain for nearly forty years. He was active in civic and community activities and had served as a member of the McCurtain School Board for nearly 30 years.

Born in Morrilton, Arkansas, Doctor Williams graduated from the St. Louis College of Physicians and Surgeons in 1918. He also attended Baylor University, Waco, Texas.

### GEORGE S. MECHLING, M.D.
### 1905-1958

George S. Mechling, M.D., 52 year-old former Oklahoma physician, died in New Orleans August 23, 1958.

Born in Newkirk in 1905, Doctor Mechling graduated from the University of Oklahoma School of Medicine in 1932 and later was a professor in the same school. After residing in Oklahoma City for 33 years, he moved to Jackson, Louisiana where he joined the staff of the East Louisiana State Hospital.

Doctor Mechling was a Diplomate of the American Board of Anesthesiology, a Fellow of the International College of Anesthetics and a member of the American College of Anesthesiology.

# PHYSICIAN PLACEMENT

### General Practice

William Z. Cook, Jr., M.D., 1614 Wolverton, Ardmore, Oklahoma, age 31, married, graduated from University of Oklahoma School of Medicine, 1955. Will be available July, 1958 upon completion of military service.

Albert Stanley Bailey, Jr., M.D., P.O. Box 1381, Westhampton Beach, L. I., New York, age 28, married, graduated from University of Oklahoma, 1955, presently in military service, will be available May, 1959.

Gladys Smith, M.D., 800 N.E. 13th, Oklahoma City, Oklahoma, single, graduated from University of Oklahoma School of Medicine, 1947, board qualified in Radiology and is interested in doing a combination of general practice and Radiology.

John D. Wise, Booneville, Arkansas, age 30, married, graduated from University of Arkansas, 1954, veteran, available immediately.

Gerald C. Zumwalt, M.D., 1701 Avenue P, Del Rio, Texas, age 27, married, graduated from University of Oklahoma, 1956, veteran, will be available July, 1959.

### General Surgery

Duane H. Dougherty, M.D., 201 Avon Road, Tonawanda, New York, age 30, married, veteran, New York University 1953, board qualified, will be available July, 1958.

Ralph L. Hopp, M.D., 338 E. Kingsley, Ann Arbor, Michigan. Married, veteran, Board Certificate held in General Surgery. Graduated Indiana University, 1950, will be available July 1, 1958.

### Internal Medicine

Robert Edward Weaver, M.D., 1133 West Frey Street, Stephenville, Texas, age 34, married, board certified in internal medicine, graduated from Universit of Pennsylvania School of Medicine, 1949, veteran, prefers to practice in or near a teaching center. Will be available August, 1958.

### Psychiatry

C. Frank Knox, M.D., 1922 Northwood Apartments, Ann Arbor, Michigan, married, age 32, graduated from Washington University, St. Louis, Missouri, 1954, veteran, now completing a four years psychiatric residency, will be available June, 1959.

### Thoracic and Cardiovascular Surgery

James L. Russell, M.D., Charity Hospital of La., New Orleans 12, La., age 30, veteran, graduated from University of St. Louis 1949, Board certified in General Surgery, Board qualified in Thoracic and Cardiovascular. Will be available August, 1958.

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# CLASSIFIED ADS

COMBINATION laboratory x-ray technician. Registered male, married, two children. Seven years experience, hospital and clinic. Desires to locate in Oklahoma City area. Write Key B, c/o The Journal, Oklahoma State Medical Association, Box 9696, Oklahoma City, Oklahoma.

OBSTETRICIAN-GYNECOLOGIST WANTED: Excellent opportunity, progressive 3 man group, community 30,000. Well established, complete clinic and hospital facilities. Board qualified. Equity interest without investment after probation. Write Key C, c/o The Journal Oklahoma State Medical Association, P.O. Box 9696, Shartel Station, Oklahoma City, Oklahoma.

WANT TO BUY: Late model diathermy machine and small sterilizer. Write Key A, c/o The Journal, Oklahoma State Medical Association, Box 9696, Shartel Station, Oklahoma City, Oklahoma.

FOR SALE: Physicians equipment including 100 M.A. Westinghouse x-ray with fluoroscope. $2,500.00. Will sell x-ray separately. Contact Bob Grundy, Grundy Rexall Drug, Comanche, Oklahoma.